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SUMMARY
OF
THE PRINCIPAL MEASURES
OF
THE VICEROYALTY
OF
THE MARQUESS OF DUFFERIN AND AVA,
IN
THE MILITARY DEPARTMENT.

FROM DECEMBER 1884 TO DECEMBER 1888.

VOLUME V.

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LORD DUFFERIN'S VICEROYALTY.

FROM DECEMBER 1884 TO DECEMBER 1888.

CHAPTER I.

INTRODUCTORY.

The Earl of Dufferin arrived in India on the 9th December 1884, and assumed the office of Viceroy and Governor-General of India on the 13th December 1884.

The Military Department is in charge of the Military Member of the Governor-General's Council, and at the time of Lord Dufferin's arrival this position was filled by the Hon'ble Lieutenant-General T. F. Wilson, C.B., C.I.E. This distinguished soldier died at Barrackpore on the 28th February 1886, within a few months of his completing a five years' tenure of the appointment. The following notification was issued:—

“The Hon'ble Lieutenant-General Thomas Fourness Wilson, C.B., C.I.E., an ordinary Member of the Council of the Governor-General, died at Barrackpore on the 28th February 1886. The President in Council, with the deepest regret, notifies to the community this mournful event, which is all the more melancholy as occurring at a time when General Wilson was looking forward to an early return to his native land, at the close of a long and distinguished Indian career. * * * * ”

“The President in Council has directed that the flag of Fort William be lowered to half-mast high during the whole of this day, and that fifteen minute guns be fired at the time of the funeral from the ramparts of Fort William.”

Lieutenant-General Wilson was succeeded by Major-General T. E. Hughes, C.I.E., R.A., who held the office

from the 1st March 1886 to the 24th May following; the date of his death. The following notification was issued on this occasion :—

“The Hon’ble Major-General Thomas Elliott Hughes, C.I.E., R.A., an ordinary Member of the Council of the Governor-General, died this morning at 10 o’clock.

“The Governor-General in Council notifies this mournful event to the community with the deepest regret. *

“ * * His Excellency in Council has directed the flag at Fort William to be lowered to half-mast high during the whole of to-morrow, and fifteen minute guns to be fired during the funeral.”

Pending the arrival in India of Major-General G. Chesney, who had been selected for the position while on furlough in England, Colonel (afterwards Major-General) O. R. Newmarch, officiating Secretary to the Government of India, Military Department, was appointed, and performed the duties from the 29th May to the 23rd July 1886. He was relieved on the 24th July 1886 by Major-General (now Lieutenant-General) Chesney, C.B., C.S.I., C.I.E., R.E., who still holds office.

The Commanders-in-Chief in India during the period under review were :—

From the 13th December 1884 to the 27th November 1885,
H. E. General Sir D. M. Stewart, *Bart.*, G.C.B., G.C.S.I.,
C.I.E.

From the 28th November 1885 to date, H. E. General Sir F.
S. Roberts, *Bart.*, G.C.B., G.C.I.E., V.C.

During the same period, the appointments in the Military Department were held by the following officers :—

Secretary.

From 13th December 1884 to 2nd September 1885, Colonel
(afterwards Major-General) G. Chesney, C.S.I., R.E.

From 3rd September 1885 to 28th May 1886, Colonel O. R.
Newmarch.

From 29th May 1886 to 23rd July 1886, Lt.-Colonel E. H. H. Collen.

From 24th July 1886 to 12th November 1886, Colonel O. R. Newmarch.

From 13th November 1886 to date, Lt.-Colonel E. H. H. Collen.

First Deputy-Secretary.

From 13th December 1884 to 30th December 1884, Lt.-Colonel E. H. H. Collen.

From 31st December 1884 to 25th May 1887, Colonel A. C. W. Crookshank, c.B.

From 26th May 1887 to 13th October 1887, Lt.-Colonel T. Deane.

From 14th October 1887 to date, Colonel A. C. Toker, c.B.

Second Deputy-Secretary.

From 13th December 1884 to 30th December 1884, Colonel A. C. W. Crookshank, c.B.

From 31st December 1884 to 25th May 1887, Lt.-Colonel T. Deane.

From 26th May 1887 to 1st September 1887, Captain W. J. B. Bird.

From 2nd September 1887 to 13th October 1887, Colonel A. C. Toker, c.B.

From 14th October 1887 to 31st October 1887, Captain W. J. B. Bird.

From 11th November 1887 to date, Major A. D. Anderson, R.A.

First Assistant-Secretary.

From 13th December 1884 to 30th December 1884, Lt.-Colonel T. Deane.

From 31st December 1884 to 25th May 1887, Captain W. J. B. Bird.

From 26th May 1887 to 1st September 1887, Lt.-Colonel E. Hay.

From 2nd September 1887 to 13th October 1887, Captain
W. J. B. Bird.

From 14th October 1887 to 9th February 1888, Lt.-Colonel
E. Hay.

From 10th February 1888 to date, Major E. G. Barrow.

Second Assistant-Secretary.

From 13th December 1884 to 30th December 1884, Captain
W. J. B. Bird.

From 31st December 1884 to 25th May 1887, Lt.-Colonel
E. Hay.

From 26th May 1887 to 1st September 1887, Major E. G.
Barrow.

From 2nd September 1887 to 13th October 1887, Lt.-Colonel
E. Hay.

From 17th October 1887 to 9th February 1888, Major
E. G. Barrow.

From 10th February 1888 to date, Captain S. D. Gordon.

Assistant-Secretary for Military Works.

From 13th December 1884 to date, Captain (now Major)
J. E. Broadbent, R.E.

Accountant-General, Military Department.

From 13th December 1884 to 2nd September 1885, Colonel
(afterwards Major-General) O. R. Newmarch.

From 30th September 1885 to 6th November 1885, Captain
W. R. LeG. Anderson.

From 7th November 1885 to 28th May 1886, Lt.-Colonel
E. H. H. Collen.

From 29th May 1886 to 23rd July 1886, Captain W. R.
LeG. Anderson.

From 24th July 1886 to 12th November 1886, Lt.-Colonel
E. H. H. Collen.

From 13th November 1886 to date, Colonel H. G. Pritchard.

Deputy-Accountant-General.

From 13th December 1884 to 2nd September 1885, Captain W. R. LeG. Anderson.

From 3rd September 1885 to 6th November 1885, Major J. Robertson, C.I.E. (in addition to his own duties as Assistant-Accountant-General).

From 7th November 1885 to 28th May 1886, Captain W. R. LeG. Anderson.

From 29th May 1886 to 23rd July 1886, Major J. Robertson, C.I.E. (in addition to his own duties as Assistant-Accountant-General).

From 24th July 1886 to date, Captain W. R. LeG. Anderson.

Assistant-Accountant-General.

From 13th December 1884 to 1st March 1888, Major J. Robertson, C.I.E.

From 1st March 1888 to date, Mr. F. J. Atkinson.

The changes in the department have been numerous during the last four years. Major-General Newmarch retired; Colonel Crookshank was appointed to the command of the 34th Pioneers; Captain Bird joined the Military Accounts Department; Lieutenant-Colonel Deane officiated as Director of the Army Remount Department; and Lieutenant-Colonel Hay died on the 9th February 1888.

Colonel Crookshank having proceeded on active service to the Black Mountain, in command of one of the columns of the expeditionary force, was severely wounded in action on the 5th October 1888, and died of his wound on the 24th idem. At the close of the proceedings of the Legislative Council of the Governor-General on the 25th October 1888, His Excellency the President spoke as follows regarding the death of Colonel Crookshank:—

“I am sure it will be matter of regret to all of the members of the Legislative Council to have heard the sad intelligence of the

death of a very distinguished officer, in consequence of a wound which he recently received during the operations of Her Majesty's troops in the Black Mountain. We were all personally acquainted with Colonel Crookshank, as, for a considerable period, he served the Government of India in the important capacity of Deputy-Secretary in the Military Department. Not only so, but he also has had a distinguished career as a soldier, and he has now lost his life in the discharge of his duties as the Colonel commanding one of the four columns that were despatched against the rebellious tribes in the Black Mountain, and in command of the Pioneer regiment. It is unnecessary for me to add with what deep regret the Government of India has learnt the loss of so gallant an officer and so distinguished a servant of the Crown."

The Military (Marine) Department is the ministerial office of the Government of India for the conduct of the business of the administration connected with the Army of India and the Indian Marine Service. It is charged with the duty of conserving the military policy of the Government of India, laying before the Governor-General in Council all military questions requiring the orders of that authority, and representing the manner in which proposals affect the army at large and the finances of the country. The following is the staff of the department :—

Secretary.

First Deputy-Secretary.

Second Deputy-Secretary.

Two Assistant-Secretaries.

One Assistant-Secretary for Military Works.

Accounts Branch.

Accountant-General (who is also Deputy-Secretary for Finance).

Deputy-Accountant-General.

Assistant-Accountant-General.

The following heads of departments are directly under the Military Department :—

The Director-General of Ordnance in India.

The Inspector-General of Military Works.

The Commissary-General-in-Chief.

The Controller of Military Accounts, Bengal.

The Surgeon-General, Her Majesty's Forces, Bengal.

The Surgeon-General with the Government of India, who is also under the Home Department.

The Director of the Army Remount Department.

The General Superintendent, Horse Breeding Department.

The Superintendent of Army Clothing, Bengal.

The Military Department corresponds with the Adjutant-General and Quartermaster-General in India, and conveys the instructions of the Government of India to the Commander-in-Chief in India through those officers, and with the administrative departments above-mentioned ; it corresponds with the Governments of Madras and Bombay in respect to all matters connected with the armies of those presidencies ; with the Resident at Haidarabad for the Haidarabad Contingent ; with the local corps under the Government of India, through the Foreign Department ; and with the Home Department on civil and ecclesiastical matters relating to the army ; while it also corresponds on a variety of military subjects with the local civil governments, administrations, and departments. A great deal of business is now done by personal interviews or by the exchange of " notes " or " minutes," instead of formal letters.

The Military Department is organized for administrative purposes into three main divisions. The first division, under the First Deputy-Secretary, deals with all military questions, such as appointments, commands, promotions, field operations, intelligence, organization, engineers, artillery, volunteers, distribution of the army, furlough, pensions, retirements, and many other subjects of a cognate kind. The second division of the department, under the Second Deputy-Secretary, deals chiefly with questions connected with the administrative

departments, such as armaments, arms, clothing, equipment, commissariat, transport, ordnance, remount and veterinary departments, and with medical and sanitary subjects. The third division, under the Accountant-General and Deputy-Secretary for Finance, comprises a Finance Branch and an Account Branch which deal with all questions connected with pay and allowances, accounts, estimates, and financial subjects. Besides these three main divisions there are also the Military Works and Marine Branches. The former deals with all questions relating to barracks, fortifications and military works generally, and the latter with all subjects connected with the marine service of India and the Royal Navy.

In attempting to recount the various important measures connected with the Army of India which have been proposed and carried out during the Viceroyalty of the Marquess of Dufferin and Ava, it must be borne in mind that the history of the military administration during that period cannot be given in a connected historical form. It may be possible in some departments of the administration to present a connected account of the various events which have taken place, and the measures which have been initiated, in comprehensive sequence ; to narrate the history of the foreign or financial policy, of that which governs the programme of public works construction, or of the policy controlling the beneficial reforms instituted in the departments, which deal with education, police, revenue, and agriculture. But an army is a great machine consisting of a vast number of separate parts, working together to produce a particular result, so that an account of the military administration during any particular period must be more or less a gathering together of details ; and even in the history of the campaigns which have

taken place, although they may have been complete in themselves, yet it is in the Foreign Department of the Government that must be found, not only the key of the action which is taken, but also the lines of the policy which may possibly connect one expedition or campaign with another.

Another point which should also be remembered in considering the work of the Military Department is the variety of the subjects which are dealt with. Eighteen years ago Sir Henry Norman described the work as "immense," and it has increased considerably since those days. In the space of twenty-four hours a large number of subjects, some of comparatively small, others of great importance may have to be considered. At one moment it may be a demand for reinforcements for some outlying point of the Empire; the next question may be about the supply to England of lance-staves. Then the Military Department may have to deal with privileges for the troops in Burma; to consider some question connected with sub-marine mining defences; then to investigate a question of accounts, either in India or with the War Office; the mobilization of the army, or the re-organization of staff and army departments may be the next work to be dealt with; then questions connected with appointments may have to be considered: while the relief of some regiment; the inspection report of a volunteer corps; the raising, equipment, and despatch of a body of military police; the transport of certain troops by railway; questions concerning the removal of officers to the half-pay list; matters connected with pensions, gratuities, and pay and allowances; experiments in camp equipage; the work of a military factory; the construction of the lines of a native regiment; the issue of medals and decorations to the troops composing some expedition; whether certain military

departments, such as armaments, arms, clothing, equipment, commissariat, transport, ordnance, remount and veterinary departments, and with medical and sanitary subjects. The third division, under the Accountant-General and Deputy-Secretary for Finance, comprises a Finance Branch and an Account Branch which deal with all questions connected with pay and allowances, accounts, estimates, and financial subjects. Besides these three main divisions there are also the Military Works and Marine Branches. The former deals with all questions relating to barracks, fortifications and military works generally, and the latter with all subjects connected with the marine service of India and the Royal Navy.

In attempting to recount the various important measures connected with the Army of India which have been proposed and carried out during the Viceroyalty of the Marquess of Dufferin and Ava, it must be borne in mind that the history of the military administration during that period cannot be given in a connected historical form. It may be possible in some departments of the administration to present a connected account of the various events which have taken place, and the measures which have been initiated, in comprehensive sequence; to narrate the history of the foreign or financial policy, of that which governs the programme of public works construction, or of the policy controlling the beneficial reforms instituted in the departments, which deal with education, police, revenue, and agriculture. But an army is a great machine consisting of a vast number of separate parts, working together to produce a particular result, so that an account of the military administration during any particular period must be more or less a gathering together of details; and even in the history of the campaigns which have

taken place, although they may have been complete in themselves, yet it is in the Foreign Department of the Government that must be found, not only the key of the action which is taken, but also the lines of the policy which may possibly connect one expedition or campaign with another.

Another point which should also be remembered in considering the work of the Military Department is the variety of the subjects which are dealt with. Eighteen years ago Sir Henry Norman described the work as "immense," and it has increased considerably since those days. In the space of twenty-four hours a large number of subjects, some of comparatively small, others of great importance may have to be considered. At one moment it may be a demand for reinforcements for some outlying point of the Empire; the next question may be about the supply to England of lance-staves. Then the Military Department may have to deal with privileges for the troops in Burma; to consider some question connected with sub-marine mining defences; then to investigate a question of accounts, either in India or with the War Office; the mobilization of the army, or the re-organization of staff and army departments may be the next work to be dealt with; then questions connected with appointments may have to be considered: while the relief of some regiment; the inspection report of a volunteer corps; the raising, equipment, and despatch of a body of military police; the transport of certain troops by railway; questions concerning the removal of officers to the half-pay list; matters connected with pensions, gratuities, and pay and allowances; experiments in camp equipage; the work of a military factory; the construction of the lines of a native regiment; the issue of medals and decorations to the troops composing some expedition; whether certain military

hospitals should be established or closed ; and every kind of question connected with the organization, drill, instruction, supply, transport, clothing, and equipment of the army, may all follow one upon the other in rapid succession.

The business of military works throws additional labour on the Military Member of Council and the Secretary and his staff. In this branch all questions connected with cantonments, roads and railways in their military use, barrack accommodation, telegraph business connected with the army, sub-marine defences, barracks, buildings of all kinds (whether it is a question of a dâk bungalow required at an outlying military post, a new church, or hospital), and all the great works connected with the defences of the Empire, have to be dealt with.

Every effort is made to decentralize military business, and to give power to local authorities—and more will be probably be done in the future in this direction—but the central office of military administration, which has to deal with proposals for change involving financial considerations, and to lay all important military matters before the Governor-General in Council, must always have a great deal of work to perform.

It must also be recollected that the officers of the Military Department hold corresponding positions in the Marine Department ; and the administrative work of the marine service and marine matters generally are dealt with in the Marine Branch of the Department, although no special officer is allotted for this work.

“ Her Majesty’s Indian Marine,” as at present existing, was instituted in 1877, and re-organized in 1884, since which time much has been accomplished towards the constitution of the service. The Indian Marine does not consist of many vessels or of a large establishment

of officers and engineers ; but its existence is a necessary part of the military strength, while, from a financial point of view, it is an economical servant of the State. Its vessels are employed in the transport of troops by sea and river within Indian waters, and a large amount of money is thus saved, which, but for these vessels, would be expended in paying for the hire of transports. Nor is this the only advantage the Indian Government expects to derive from its marine service. The fleet is soon to be provided with gun, torpedo, and guard boats, for the protection of Indian harbours ; and every year a small number of marine service officers undergo a course of gunnery and torpedo instruction in England. It is hoped that, before the lapse of many years, the Indian Marine will be a valuable auxiliary to the Royal Navy for the protection and defence of Indian ports against the attack of any foreign power. The East India squadron, consisting of ten ships of war under a naval Commander-in-Chief, is charged with the naval defence of Indian waters ; and of these, four are placed at the direct disposal of the Government of India for service in the Persian Gulf, in the Arabian Sea, and in the Bay of Bengal.

Her Majesty's Indian Marine Service is administered by a " Director of the Indian Marine," but it is under the direct control of the Government of India in the Marine Department. The Department is in constant communication with Her Majesty's Secretary of State for India, and, through him, with the Admiralty. In India, it is referred to by the other departments of the Government on all matters having a nautical bearing : it corresponds with the Governments of Bengal, Madras and Bombay, with the Chief Commissioners of Burma and Assam, and with the heads of departments under it.

The numerous questions which are referred to the Marine Department for opinion or decision necessarily vary in importance; for example, a question relating to the introduction of a law for the maintenance of discipline in the service, the arming of vessels for the proper protection of the harbours, or the constitution of a department for the marine survey of Indian seas, may engage the attention of the department at one time : while at another moment orders may be required with reference to trooping arrangements, the purchase of a new vessel, or the sale of an old one. The mention of a few subjects, taken without any attempt at selection,—such as the framing of rules for the control of marine expenditure throughout India; the exclusion of foreign ships of war from particular ports; the receipt, custody and issue of Royal Navy ordnance reserve stores; the control of dockyards at Bombay and Calcutta; the pay, pension, and leave rules of the service; the marine surveys to be undertaken each year,—may enable a general idea to be formed of the varied business of the department.

The period during which Lord Dufferin has held the Viceroyalty has been one of great activity in the Military Department. Many changes and improvements have taken place in the military administration; the commands and staff of the army have been re-organized; and, while greater efficiency has been secured by the more scientific division of the country into districts, and by the amalgamation of the separate departments of the Adjutant-General and Quartermaster-General, a considerable economy has been effected by the arrangement. The reconstruction of the Royal Artillery commands in India has been carried out, resulting in a saving of expenditure and in administrative advantages; while a further

development in this direction is likely to lead to good results. The Punjab Frontier Force has been transferred to the control of the Commander-in-Chief in India,—a measure which the events of late years showed to be plainly necessary. But perhaps the most important proposal connected with the administration of the army—second only in importance to the great change which took place thirty years ago, in the transfer of the forces of the East India Company to the Crown—is the recommendation to abolish the presidential army system. That measure, which had been considered and supported by the Governments of Lord Lytton and of Lord Ripon without effect, was pressed upon Her Majesty's Government by Lord Dufferin in 1885, and again in 1888; the result being that a comprehensive scheme, worked out in complete detail according to instructions received from the Secretary of State, is now under the consideration of Her Majesty's Government.

In the strength and organization of the army, large changes and reforms have been introduced. The British army in India has been raised in cavalry, artillery and infantry, by a strength of between 10,000 and 11,000 troops; while in the native army, the fighting element has been materially increased by between 19,000 and 20,000 men; so that, in round numbers, the total strength of the Indian army has been raised by 30,000 men. Various minor, though important, changes in organization have taken place, which will be found detailed in this volume. The formation of reserves for the native army has been brought into practical effect, and various methods are now being adopted to hasten the completion of this body. Another important reform has been introduced by the linking of the battalions of native infantry,

and by the institution of regimental centres, by which arrangements not only will ready increase to battalions going on service take place in the future, but recruiting will be facilitated and the contentment of the army ensured, by the establishment of these regimental homes.

In the Haidarabad Contingent, which may be considered part of the armed strength of the Empire, the organization and conditions of service have been improved; and the employment of some of the regiments of this force on active service has tended to strengthen the feeling of loyalty to the paramount power, and to give contentment to the force. Nor must it be forgotten that during the period of which this account treats, we have witnessed the employment of a levy raised from tribes which were once the danger of the Khaibar Pass, fighting, as the Khaibar Rifles, shoulder to shoulder with British and native troops in the campaign against the tribes of the Black Mountain. In this campaign a contingent of the troops of the Kashmir State has also been successfully employed. On various occasions contingents from the armies of native states have been brigaded with British troops, and the question of creating a second line from these armies has been under earnest consideration. The Viceroy announced the measures which have been decided on during his visit to Patiala in November 1888. The general scheme is, that a portion of the armed force of each native state shall be organized and placed on such a footing, aided by the inspection and general supervision of British officers, as shall enable it to take its place in line with Imperial troops.

But while the regular and auxiliary troops of the Indian Empire have been increased and improved, steps have also been taken towards the improvement of a force upon which reliance must be placed for the

maintenance of order, and the internal security of the country. During the period of Lord Dufferin's Viceroyalty the Volunteer Force of India has increased from 13,500 to 18,500. Various improvements have been effected in the conditions of service and in the organization of the force, and a scheme for the formation of volunteer reserves is in active operation.

The occupation of Burma has led to a still further increase of the military strength, in the formation of the large force of military police and levies which has been placed at the disposal of the civil administration of that country.

The mobilization of the army has received prolonged and practical consideration. Early in 1885, in consequence of the state of political affairs in Europe and the possibility of war, arrangements had to be made for placing a force of between 60,000 and 70,000 men in the field; and although the active service of this force was unnecessary, in the following year, and in 1887, the Military Department, the head-quarters staff, and the heads of army departments were engaged in the laborious task of working out every detail for the mobilization and concentration of a field army. Some results of their labours have been shewn in the quickness and smoothness with which a force was sent on active service against the tribes of the Black Mountain.

While the administration has been simplified, the army and its reserves increased, and its mobilization provided for, measures have been instituted for the moral and material improvement of the army. In the British army, perhaps one of the greatest improvements is the establishment of regimental institutes. This proposal, made by the Commander-in-Chief, is a still further step on the path which has been followed for many years, of endeavouring to improve the moral

and material condition of the British soldier in India ; the old canteen system will be abolished, and a more rational plan provided for the comfort, amusement, and refreshment of the British soldier. A great deal of special work has been done in the construction and improvement of barracks, and in the water supply of cantonments, while year by year more troops have been cantoned in hill stations during the summer heats.

In the native army various improvements have been made in the position of native soldiers. The training of the army in musketry and signalling and in various other branches of the military art has been developed, camps of exercise for all arms having been held, at which the practical education of the army is carried out. Many improvements and changes have also taken place in the equipment of the army. The Martini-Henry rifle is being issued to the native troops, while arrangements are in progress for supplying the British portion of the army with the new magazine rifle when finally determined on in England ; and the field and horse artillery are being armed with a new and more powerful breech-loading field gun.

In the army departments, upon the efficiency of which so much of the power of the army depends, various reforms have been effected, whether in the commissariat and transport of the army, or in the arrangements for the supply of horses. In the financial administration of the army many beneficial alterations have taken place. A better system is now in force for obtaining information of military expenditure ; the responsibilities of the various departments are more clearly laid down, and the regulations both for service in the field and in peace, have been, or are being, drawn up, while considerable changes in the department which deals with military accounts are likely to lead to the

best results. Although the expenditure on the army has necessarily increased by the force of circumstances which it is not in the power of the Government of India to contro^l, many economies have been effected, and the cost of the army has not increased in a direct ratio to the increase of the number of troops. The labours of the Finance Committee appointed by Lord Dufferin in 1886 have also conduced to economy.

Lord Dufferin's administration will be specially memorable by the fact that the defences of the Empire have been placed upon a satisfactory footing. When he took office as Viceroy, the ports and frontiers of India were practically defenceless. The question was at once taken up in earnest, and in spite of many difficulties, the great scheme of defence was initiated and is now being carried to a practical conclusion. The chief ports of India are in process of fortification, and many of the works are completed, or approaching completion. A system of frontier fortifications and a large scheme of military railways have been carried out, which must add vastly to the security of the Empire; while the active defence of the Indian coasts has been provided for by the improvements made in the sub-marine mining arrangements and in the marine service, and by the strengthening of that service in the various ways enumerated in the chapter relating to the Marine.

During the period of Lord Dufferin's Viceroyalty the efficiency of the administration and of the army has been practically tested in various ways. In 1885, an Indian contingent had to be sent to Suakin, on the shores of the Red Sea, to assist the forces of the Imperial Government; and in the latter portion of the same year the campaign in Burma was commenced, and the army was in the field during 1886 and 1887. In the spring of 1888, the expedition to Sikkim was

despatched against the Tibetans ; and in the autumn of 1888, the campaign against the Black Mountain tribes was begun and finished during October and the first few days of November. In all these campaigns and expeditions, the troops of the Indian army, and the administration serving the army, bore their respective parts without any failure, the troops victoriously encountering the enemy on every occasion of active warfare.

CHAPTER II.

THE ADMINISTRATION OF THE ARMY.

A proposal to transfer the Punjab Frontier Force to the control of the Commander-in-Chief in India was made by the Army Commission in 1879 (paragraph 49 of their Report) and adopted, after full discussion in Council, in 1881. It was negatived by the Secretary of State in 1883, but again brought forward in 1885, when the augmentation and re-organization of the army were finally settled. It was then stated that, in the judgment of the Government of India, recent events had shown the measure to be more plainly necessary than before; that a considerable part of the Punjab frontier, having become overlapped and covered by the territory occupied by the British Government in Baluchistan, had ceased to be a frontier in its original sense; that it was a source of constant trouble and embarrassment, and opposed to rational principles of administration, that the force which garrisoned the Punjab should be subject to a different jurisdiction from that of the regular army stationed beyond it; and that it was believed that the transfer would be acceptable to the officers of the force. It was at the same time remarked that the Government of India did not propose to make any change in the organization of the Punjab Frontier Force, which would continue to be a local force stationed beyond the Indus and in Hazara and, if necessity should arise, in Múltan, but simply that it should come under the orders of the Commander-in-Chief.

*Transfer of
the control
of the Punjab
Frontier
Force to the
Commander-
in-Chief in
India.*

The Secretary of State, in sanctioning the measure in his despatch No. 275, dated the 29th October 1885, observed with satisfaction that it was not intended to alter in any degree the distinctive local character of the force,

and impressed on the Government of India the importance of preserving, as far as possible, the special connection which existed between the civil officers of the border, the frontier force, and the militia. His Lordship also requested that, in announcing the measure, care should be taken to make the force understand that except for the fact of their being placed on a more even footing with the Imperial Army, their actual status would in no respect be altered, and that opportunity should be taken to express the high sense entertained by Her Majesty the Queen-Empress of the loyal and gallant services which, under the Government of the province, the Punjab Frontier Force had invariably rendered to the State from the earliest period of its creation.

The special General Order issued on the occasion is given *in extenso* below :

General Order by His Excellency the Right Hon'ble the Governor-General of India in Council in the Military Department—(No. 485—"Special,"—dated Simla, 23rd July 1886.)

"With the sanction of Her Majesty's Government the Right Hon'ble the Viceroy and Governor-General of India in Council is pleased to notify the transfer of the Punjab Frontier Force, the administration of which has hitherto been vested in the Government of the Punjab, to the command of His Excellency the Commander-in-Chief in India.

"In doing so, His Excellency in Council is authorized to express the high sense entertained by Her Majesty the Queen-Empress of the loyal and brilliant services which, under the Government of the province, the Punjab Frontier Force has invariably rendered to the State from the earliest period of its creation. The Governor-General in Council takes this opportunity to place on record his appreciation of the admirable manner in which the Force has for so many years been administered by the Punjab Government, and of the wise and well-directed measures taken by that Government from time to time to promote and maintain its efficiency.

"In arranging the details of this change of control, the political exigencies of the frontier have been kept prominently in view ; and every effort has been, and will be, made to interfere as little as possible with the present system of frontier administration. The Force will therefore continue as a separate unit for frontier duties, and, as far as may be found practicable, its local and distinctive character will be preserved, its institutions maintained, and its existing privileges continued.

"The transfer will take place from the 1st August 1886, and His Excellency the Viceroy and Governor-General in Council is confident that all ranks of the Force, British and Native, under the command of His Excellency the Commander-in-Chief in India, will spare no efforts to worthily uphold the traditions of loyalty, discipline, and bravery, which have been handed down to them, and to maintain unimpaired the *esprit de corps*, efficiency, and soldierly qualities, which have gained for the Punjab Frontier Force honor and distinction both in cantonments and in the field, and have raised this fine body of troops to the distinguished position of a fighting force second to none in the Army."

In the latter end of 1883, when the organization of the Royal Artillery had been re-modelled at home, the Government of India had under consideration the expediency of reducing the number of senior officers in this country in consequence of the abolition of the rank of regimental colonel under the Royal Warrant of the 1st July 1877, and the decrease of the number of batteries in India which took place in 1881. It was thought that the establishment of senior officers was somewhat in excess of the actual needs of the service, and that the staff allowances proposed by the Commander-in-Chief, which would have allowed a staff salary of Rx.* 80 per mensem to the colonels on the staff, were too high for the duties and responsibilities assigned to the officers, more particularly in certain commands, where colonels on the staff would only have the supervision of three or

Reconstruction of Royal Artillery commands.

* "Rx." indicates tens of rupees, and the term will be used throughout this volume.

four batteries already under the executive command of lieutenant-colonels.

A scheme for the reconstruction of the Royal Artillery divisions and districts in India was accordingly submitted by the Government of India in their letter No. 36, dated 26th February 1884, and approved by the Secretary of State in his military despatch No. 6, dated the 15th of January 1885.

The total establishment of the higher ranks sanctioned was as follows :

2 colonels for artillery general staff.

6 colonels on the staff for commands.

14 lieutenant-colonels for divisional and district commands.

9 lieutenant-colonels for executive commands of two or more batteries at the head-quarters of all Colonels on the Staff except Burma, and at Campbellpore, Ferozepore, Agra and Thayetmyo.

2 lieutenant-colonels for artillery general staff.

2 lieutenant-colonels spare, to meet temporary vacancies caused by sick leave, &c.,—

or a total of 8 colonels and 27 lieutenant-colonels.

The following rates of staff and command pay were sanctioned :

				Per mensem.
				Rx.
6 colonels at	...	...	...	60
10 lieutenant-colonels at		...	...	40
4 ditto at		...	...	30
9 ditto at		...	...	20

The adoption of the scheme involved an immediate expenditure of about Rx. 3,400 per annum; but great advantages were expected on administrative grounds, and on grounds of efficiency, in placing the Indian system of

artillery commands on the same footing as that in force throughout the rest of the corps in England and the colonies.

It was subsequently found that the constant changes necessitated in the lieutenant-colonels' commands by the above progressive scale of command pay were inconvenient both to the officers themselves and to the Government; and it was proposed that a uniform rate of staff pay of Rx. 30 per mensem should be introduced for the 28 lieutenant-colonels' commands. The measure was approved by the Secretary of State, and effected a small saving, together with a considerable reduction in travelling allowances. A further development of the plan outlined above has been under consideration, and if adopted will lead to greater economy and efficiency.

The question of the revision of commands and staff in India was brought forward in 1879 in the report of the Army Organization Commission, who invited particular attention to the unsatisfactory nature of the system under which the forces in this country were divided into three presidential armies, and to the confusion arising from the promiscuous use of the words "divisions" and "brigades," which were applied to both territorial commands and tactical units. The subject was referred to a special committee consisting of the present Secretary (then Accountant General), the Quarter-Master-General and the Deputy Adjutant-General, which was constituted in May 1886, to assist the Finance Committee in their consideration of the question.

Re-organization of commands and staff.

After long and careful discussion a despatch was sent to the Secretary of State in September 1887, with the following recommendations:—

- (I) That Generals' commands should be divided into first and second class districts; the term "division" being reserved for a force organized for active service.

(II) That the following changes and reductions should be made in the divisions and districts of the three presidencies :—

(a) In Bengal—

- (i) Six divisions to be maintained, the Quetta district being made into a division and the Sirhind division reduced to a district.
- (ii) Twelve districts to be reduced to nine, including one in Burma.

Provision was also made for a brigadier-general as Inspector-General of Cavalry.

(b) In Madras—

- (i) Three divisions to be reduced to two by the reduction of the Bangalore division to a district.
- (ii) The present five districts to be increased eventually to six, including Bangalore and two districts in Burma, the Bellary and Belgaum districts being amalgamated, and Nagpur transferred to Bombay.

(c) In Bombay—

- (i) Three divisions to become two by the reduction of the Northern and Mhow divisions to districts, and the conversion of the Bombay district into a division.
- (ii) Four districts to become five by the increase of the Nagpore, Northern and Mhow districts, the reduction of Nasirabad, and the conversion of the Bombay district to a division.

The result, taking the whole of India, was a reduction of four commands, although two new commands were provided for Burma.

- (III) Ten Colonels on the Staff were to be created with a staff salary of Rx. 80 per mensem, to take the place of present commandants of large stations and second class brigadiers, the commands of other considerable stations being exercised by the senior officer in garrison with a command allowance of Rx. 20.
- (IV) The Adjutant-General's and Quartermaster-General's Departments in the divisional and district staff to be amalgamated ; a total of 59 officers (including two inspectors of signalling, an assistant adjutant-general of Royal Engineers, a brigade-major of cavalry, and the staff for two out of three brigades in Burma) being provided, instead of 64 as at present.

The general result of the proposals, although providing for the several new appointments mentioned above, and for additional charges for Burma, was calculated to create a saving of over Rx. 1,300 per annum in staff salary alone ; and leaving the staff of Burma out of the question, the saving was estimated at over Rx. 22,000 a year.

The Secretary of State having requested that the Governments of Madras and Bombay might be afforded an opportunity of expressing their views on the proposed changes, the following modifications of the scheme were subsequently, after consultation with those Governments, suggested to him :—

I.—Bengal.—

That Sambalpur and Cuttack should be added to the Presidency District.

II.—Madras.—

That Belgaum should be fixed as the headquarters of the new Northern district.

III.—*Bombay.*—

- (i) That Bombay should continue to be a district command,—Surat, Baroda, and Bhuj being included within its limits.
- (ii) That Mhow should be a first-class district.

The Secretary of State in his despatch No. 120, dated the 17th May 1888, approved generally of all the proposed arrangements, and these have been carried out.

*Abolition of
the presiden-
tial army sys-
tem.*

The question of the abolition of the presidential army system engaged the attention of the Army Organization Commission in 1879. It was exhaustively considered by the Government of India in 1881, and together with many other reforms, was recommended to the Secretary of State during that year. Many of the despatches sent home during 1881 bear on the subject, but particularly those quoted in the margin.

No. 85 of 1881.
No. 282 of 1881.
No. 401 of 1881,

The main object of the changes embraced by the proposals was the abolition of the presidential organization, under which the administration of two of the three armies maintained in India is connected with the local Governments of Madras and Bombay. This organization has been found to be unsuited to the altered conditions of the country, while the want of financial responsibility, and the lack of uniformity and unity of control, have rendered a change of system advisable. It was therefore proposed by the Government of India, following the recommendation of the Army Commission, to substitute for the presidential armies an organization by which all the military forces in India, exclusive of local corps under the Foreign Department, would be brought under the undivided

control of the Commander-in-Chief in India, and, through him, of the Supreme Government. The army was further to be divided into four local armies, each complete in itself, both as regards staff and departments. The four armies thus formed were to be affiliated to the following territorial areas :—

Madras Army :—

Madras Presidency.
Burma.
Haidarabad.
Mysore.

Bombay Army :—

Bombay Presidency.
Central Provinces.
Rajputana.
Central India.
Baluchistan.

Hindustan Army :—

North-West Provinces and Oudh.
Bengal.
Assam.

Punjab Army :—

Punjab.

It was considered that the greater segregation thus provided for would increase that security, and immunity from combined action, which the advocates of the presidential system and of the reformed plan equally desire to maintain.

Many of the reforms connected with the proposed greater change were accepted by the Secretary of State, and have been carried out ; but the abolition of the presidential system was not then approved.

In 1885, the Government of Lord Dufferin pressed on the Secretary of State the desirability of effecting the proposed change without further delay, especially in view of the active operations then under contemplation; and in military despatch No. 87, dated 1st June 1888, the Government of India again strongly urged that the changes in military administration by the severance of the local governments from the presidential armies should no longer be deferred.

In reply to this, on the 9th August, a telegram was received from the Secretary of State asking for full and detailed information on the subject, showing exactly what orders it would be necessary to publish to carry out the proposals, which, it may be remarked, were put forward by Lord Lytton's administration, were supported by Lord Ripon's Government, and with all the weight of time and experience again pressed by the Government of Lord Dufferin. On receipt of this telegram, it was decided to form a committee, consisting of the Commander-in-Chief in India, the Hon'ble Military Member of Council, the Adjutant-General in India, and the Secretary to the Government of India, Military Department, to discuss the question and formulate proposals. The result of their deliberations was embodied in a despatch to the Secretary of State, which, with a draft General Order and other annexures, was generally approved by the Government of India. Under the organization proposed and detailed in the draft General Order, there will be four armies in India,—the Madras Army, the Bombay Army, the Hindustan Army, and the Punjab Army. No change is made in the position of the Haidarabad Contingent or other corps under the Government of India. Certain changes are made at army head-quarters in India, by the amalgamation of the Adjutant-General's and Quartermaster-General's

Departments, and provision is made for the transaction of business which is at present performed by the Madras and Bombay Military Departments. The staff of the local armies will be complete, the heads of the army departments being placed in direct relations to the lieutenant-generals commanding. At the headquarters of the Government of India and of the army, certain changes are proposed in regard to the financial power of the Commander-in-Chief, and his relations to the heads of the army departments under the Government of India. Very full details are given in the General Order and its annexures, which it is not necessary to reproduce here. Attached to the despatch was a minute, dated 1st October 1888, by His Excellency the Viceroy, from which the following extracts are taken :—

“ The draft order appears to me to comply with the instructions of Her Majesty’s Government that it should be in full detail, as it seems to provide for all the contingencies which must follow on the change contemplated. It is also in harmony with the principles declared by the Government of India in the series of despatches submitted to Her Majesty’s Government in 1881 and 1882, which dealt with the Report of the Committee on Army Organization of 1879. The leading principle of those proposals was that the army administration should be so contrived as to permit decentralization in such military business as was not of the first importance, while the supreme financial and administrative power should remain in the hands of the Governor-General in Council ; and further, that the Commander-in-Chief in India should be placed in command of the whole Army of India instead of his powers being confined chiefly to the control of the Bengal Army. In respect to the organization of the Indian Army, it was desired to maintain, in the most complete form, the separation of the Bengal Army from the armies of Madras and Bombay, and to divide the Bengal Army into two parts, in accordance generally with the recruitment of that army in Hindustan and the Punjab.

“ I think my colleagues will agree with me that the draft General Order has put these principles into practical shape.

“In that portion of the order which deals with finance, the Government of India in the Finance Department is shown to be the highest authority in India on all financial questions ; and the present powers of the Military Department are stated. The Commander-in-Chief in India is drawn into closer financial relations with the Government by the provision made that he shall discuss the budget personally with the Member of Council in charge of the Military Department, and by the clause enabling him to consult the Accountant-General on financial questions before submitting proposals for expenditure to the Government of India. In order to diminish references to the Government on matters which are not specially important, or which do not involve financial considerations, the Commander-in-Chief in India is put *en rapport* with the heads of the army departments for the transaction of business affecting the troops ; and in view of facilitating the disposal of this business, certain financial powers are given to His Excellency.

* * * * *

“As this may be the last time on which I shall have occasion, as Viceroy and Governor-General of India, to deal with a military subject of such great importance to the welfare of India, I shall take the opportunity of stating my views on this question of military administration. The form of military Government which is in existence in India is practically that which has always obtained, in principle, since the establishment of British power in this country. The details of the administration may have varied, but there has never been, so far as I am aware, any change in the application of the principle which affirms that the supreme power of Government must be responsible for the military administration, and the Commander of the Forces responsible to that power for the executive command of the army.

“The Military Department of the Government of India is the ministerial agency through which the authority of the Governor-General in Council is administered. The department is in charge of a Member of the Government, who has no military command or executive military functions, and to him the Governor-General delegates powers, to deal with, or submit to him, the military business which comes under the cognisance of the Government.

“The system of military administration in India seems to me to be well adapted to the circumstances of the country. By it the supreme financial control is retained in the hands of the supreme authority; changes in the organization of the army can only be undertaken after the proposals have been placed before the Governor-General in Council in all their bearings, both as regards the financial aspects of the question and the effect such changes may have on the army generally. The history of the past is invoked by the department which is concerned with the maintenance of the constitutional and traditional policy of the Government of India; while the purely military view of the matter under discussion is powerfully represented by the Commander-in-Chief, both through the medium of his staff and by his own presence and influence in the Council-Chamber. Under such a system I believe there is neither danger of rash innovations being carried by a military chief who, from absence from India, or other causes, may not be in sympathy with Indian circumstances and affairs, nor the slightest risk that the army of India shall be passed in the race of military reforms and inventions.

“My opinion is founded upon the experience which I have had during my tenure of the office of Governor-General, and so far from it being apparent to me that the bonds of financial control need to be relaxed, I should hope that the proposals put forward in the General Order will result in strengthening the administrative and financial control of the Government of India, while allowing the military authorities, by a more decentralized arrangement than obtains at present, adequate power in all military business, and giving them a greater interest in economy, without the observance of which it will be impossible to maintain the army.

* * * * *

“The present form of military administration in India, where every military department is worked by professional soldiers, has been tried during a century in every conceivable kind of campaign and expedition, and it has not been found wanting.

* * * * *

“No sooner had I arrived in India, then we had to despatch a force to Suakin, and to assist the Imperial Government with large re-inforcements of transport; then came the war preparations of 1885, and following immediately on the heels of the latter

the campaign in Burma of 1885-86-87; while the period of my Viceroyalty is closed by the expedition to Sikkim and the coming campaign in Hazara. I have therefore had a large experience of the working of the military administration during the preparation for, and conduct of, campaigns; and I do not hesitate to say that, although, as in all human systems, there are defects which may be remedied, the Indian Army and its military administration will bear comparison with any other army in the world. Many important changes have taken place within the army since 1885; the fighting material has been largely increased, regiments have been linked together, the reserve system has been introduced, the commands and staff of the army have been re-organized, various beneficial reforms have been carried into effect, and the defences of the Empire are now, I trust, rapidly approaching a satisfactory completion. And lastly, I must mention the great measure of mobilization, to which I gave my unqualified support from the first, under which it will be possible to put large forces rapidly into the field, with less labour than was required a few years back to place on active service mere detachments of troops.

“The change in administration and organization by the abolition of the presidential army system, supported by me in 1885, and again in our despatch of May 1888, seems to me to be a complement of all the improvements which the army system in India has of late years undergone. When that has been carried out, as I hope it will be at no distant date, and when the mobilization scheme has been brought into practical effect, then those who come after us will have but to perfect the military machinery, to assist in maintaining the splendid reputation of the Indian Army, to improve the conditions of military finance, and to preserve the form of military administration which is dealt with in the draft General Order now before us.

“I must express my sincere thanks to my hon’ble colleague, General Chesney, for the care and elaboration with which this important document has been prepared; while we are greatly indebted to His Excellency the Commander-in-Chief for the cordial advice and able assistance which he has given in this matter. This great reform which, when carried out, will I believe conduce to the highest efficiency of the Indian Army, is, as my colleagues are aware, in the largest way a product of the

genius and labours of our hon'ble colleague, General Chesney. It is, I think, twenty years ago since he first presented a comprehensive scheme for the organization of the Indian armies, similar in all essential particulars to that which is now dealt with in the General Order. I congratulate him on seeing the result of his labours in so complete a shape. It is a matter also of congratulation to myself that I have been able during my tenure of office to support and introduce the measure proposed; and I trust before I leave India it may be my pleasant duty to inform my colleagues that the sanction of Her Majesty's Government has been received to our recommendations."

Among the less important questions of administration which it has been thought advisable to consider were those connected with the Quetta District and the Haidarabad Contingent.

In 1885, it was found that inconvenience was caused to the public service and to the troops on account of the dual control which existed in the Quetta District, the military command of which was held by the Commander-in-Chief in India, while the administrative control of the various departments vested in the Bombay Government. It was finally decided that the administrative control of all departments attached to the Quetta District should be transferred to the Government of India, and that the medical administration of the district should devolve on the Surgeon-General of Her Majesty's Forces in Bengal. The ordnance establishments were transferred to the Bengal circle of superintendence, while the commissariat establishments already formed part of the western circle of the Bengal Commissariat Department.

Transfer of administrative control of the Quetta District to the Government of India.

In October 1885, the question of placing the Haidarabad Contingent under the orders of the Commander-in-Chief of the Madras Army was raised by the Secretary of State; but as the Treaty of 1853 with the Nizam vests the control of the Contingent in the British

Control of the Haidarabad Contingent.

Government through its representative the Resident at Haidarabad, and it was not thought advisable to re-open discussion upon the status of the assigned districts of Berar by suggesting a supplementary treaty, nor to carry out a measure which might be displeasing to the Nizam himself, the Secretary of State was informed that the Government of India did not consider the proposal a desirable one. The Secretary of State acquiesced in this view.

CHAPTER III.

THE STRENGTH, ORGANIZATION AND DISTRIBUTION OF THE ARMY.

The increase to the strength of the Army.

Early in 1885, it became evident to Lord Dufferin that, with the possibility of war with Russia on the horizon, the strength of the British and native armies required reconsideration, and that the approach towards India of a great European power necessitated such an increase to the military forces in the country as would place them on a footing adapted to the new conditions they might be called upon to meet.

Authority was first obtained by telegram from the Secretary of State to complete the four mountain batteries of the Punjab Frontier Force from four to six guns each, as a permanent measure, and to add 200 men to each of the eight Gurkha regiments, including the three Assam corps; and on the 13th March 1885, the Secretary of State was informed by telegram that it was advisable to raise three additional Gurkha regiments. His Lordship suggested that if these three regiments were to be additional to the 200 men per battalion already sanctioned, it would be preferable to add second battalions of the present strength, *i.e.*, 912 of all ranks, to the five regiments already existing, and this arrangement was accepted by the Government of India.

On the 30th March 1885, a telegram was sent to the Secretary of State, followed by military letter No. 63, dated 23rd April 1885, recommending an increase to the cavalry and infantry of the native armies to the extent of 4,572 and 17,608 men, respectively.

The additions to the cavalry were intended to be permanent and were as follows :—

(a) The addition of a fourth squadron and one European officer to each cavalry regiment in Bengal, the Punjab and Bombay, so as to bring up their strength to 10 British officers (including one medical officer) and 625 natives of all ranks, the two regiments of Central India Horse being brought up to the same strength but with eight British officers only.

(b) The Madras cavalry regiments to be brought up from 387 to a strength of 489 of all ranks, but to remain organized in three squadrons.

(c) The formation of three new regiments of cavalry, two in Bengal and one in Bombay.

The proposals as regards the cavalry, the cost of which was estimated at Rs. 235,000, excluding that on account of the additional British officers, were sanctioned by the Secretary of State in his telegram dated 4th August 1885, and carried out in India Army Circulars, clauses 130 and 131 of 1885.

Those relating to the infantry, which were originally for an addition of 200 men to the strength of each regiment of the three armies, were described as a measure necessitated by the aspect of affairs at the time, and subject to further consideration when the immediate emergency had passed away.

In the despatch to the Secretary of State, No. 135, dated 14th August 1885, proposals as set forth below were made with a view of placing the Indian armies on a footing adapted to the new conditions which they might be called upon to face, having regard to the advance of Russia, and her increased proximity to our North-Western frontier, which rendered the existing military establishments no longer adequate for the duties they might have to fulfil :

(i) The permanent establishment of British troops in India to be increased from 59,000 to 70,000 by the addition of 11,000 men of all arms as follows :—

Cavalry.

The addition of a fourth squadron to 9 regiments = 1,332

Artillery.

1 battery of horse artillery	...	157	
2 batteries of field artillery at	157	=	314
2 batteries of mountain artillery at	106	=	212
6 batteries of garrison artillery at	115	=	690
<hr/>			
11 batteries	...		1,373

Infantry.

Increase of 100 men to 50 regiments = 5,000

Three additional battalions at 984 = 2,952

7,952

Total increase ...

10,657

By these additions the total new establishment (exclusive of officers) would be as follows :—

Establishment as then existing	...	59,371
Addition as above	...	10,657
		<hr/> 70,028 <hr/>

(ii) The proposals for the increase to the native cavalry amounting to 4,572 men, as before stated, and which were recapitulated in this despatch, had already been sanctioned by the Secretary of State. The subsequent addition of a third squadron to the Cavalry of the Corps of Guides raised the increase in this arm to 4,704.

(iii) As regards the increase to the native infantry, the original recommendation was that 200 men should

be temporarily added, as a war measure, to each regiment of the three native armies, but for this a scheme was now substituted for the permanent re-organization of the native infantry to replace the system then existing, which was confessedly adapted only for Indian service and the maintenance of internal tranquillity.

These measures for the re-organization of the native infantry were intimately connected with the introduction of a system of reserves and the substitution of regiments composed of two or more linked battalions for single battalion regiments. Both these questions and also that of the re-organization of the commands and staff of the army, which was looked to as a means of partially recouping the additional outlay entailed by the increase to the forces in India, were alluded to at some length in this despatch, but it will be more convenient to deal with them separately.

The proposals as regards the increase to the native infantry were as follows :—

In Bengal—

A new regiment of Mazhabi pioneers (34th)	...	912
Three new battalions of Sikhs	... ..	2,736
Five new battalions of Gurkhas	... ..	4,560
The increase of 47 existing battalions by 80 men each,—832 to 912 of all ranks	... ..	3,760
		<hr/>
		11,968
Existing establishment	... ..	46,400
		<hr/>
Total	... ..	58,368

The increase to the military estimates caused by these proposals was calculated at £1,196,800 a year, excluding non-effective charges.

The whole of these proposals were sanctioned by the Secretary of State in his despatch No. 275, dated 29th

October 1885, but financial considerations did not admit of all being carried out for some time.*

In India Army Circulars, 1887, clause 46, orders were issued for the formation of the three new battalions of Sikhs above mentioned (35th, 26th and 37th) and the 2nd Battalion of the 3rd Gúrkhas; also for the addition of a squadron to the Guides Cavalry. It was, however, afterwards decided that one of the new regiments (the 37th) should be composed entirely of Dogras.

Minor measures of increase to the strength of the Army.

The increase to the British and native armies having thus been recounted, it is necessary to allude to smaller but still very important changes affecting the strength of the army.

Minor changes affecting the strength of the army.

In India Army Circulars, clause 98 of 1885, authority was given to officers commanding regiments of native infantry (Gúrkha and Assam regiments excepted) to entertain supernumeraries in excess of the authorized establishment to the extent of 20 sepoy per corps, in order to prevent regiments from falling below strength by casualties from invaliding, &c. This order was maintained in force after the native infantry regiments of the Bengal Army and the Punjab Frontier Force had been increased to a strength of 912, and it was then further extended to the Gúrkha and Assam regiments.

Entertainment of supernumeraries in native infantry regiments.

In consequence of the drain on the native infantry regiments then serving in Burma, by casualties, invaliding, and volunteering for the Burma police, the Government of India, in 1887, authorized the recruitment

Temporary increase of native infantry regiments in Burma by 200 men each.

* Subsequent additions to the strength of the native artillery (including native drivers for British mountain batteries), and to that of the corps of Sappers and Miners, raised the total increase to the native army to between 19,000 and 20,000 men.

at the depôts of those corps of 200 men per battalion, a measure somewhat more limited in its scope than a proposal of the Commander-in-Chief in India, which was to add 200 men to the fixed establishment of each regiment. In reporting this to the Secretary of State, it was said that although there might eventually be an excess establishment in some regiments, it was not anticipated that there would be any increase over the total sanctioned establishment of native infantry in India, in which there was then a deficiency of about 3,000 men.

*Formation of
two new native
mountain
batteries.*

The necessity for forming two new native mountain batteries to meet the requirements of Burma having arisen, the sanction of the Secretary of State to their formation was asked for by telegram in August 1886. On sanction being given, two batteries of six guns each were raised for general service, and were designated Nos. 1 and 2 Bengal Mountain Batteries. As regards pay, clothing, and general constitution they were placed on the same footing as batteries of the Punjab Frontier Force, and they were armed with the seven-pounder gun of 200 lbs. The approval of the Secretary of State was conveyed in despatch No. 323, dated 18th November 1886.

*Increased
war establish-
ment of horses
for artillery
purposes.*

The efficiency and mobility of batteries of horse and field artillery in India are subjects which since the Afghan war have repeatedly engaged the attention of the Government of India, particularly with regard to the want of ammunition columns.

After much discussion the sanction of the Secretary of State was asked, in January 1885, to the following proposals:—

- (1) The substitution of horses for bullocks throughout the horse and field artillery.
- (2) The withdrawal of the second line of wagons from all batteries.

- (3) The affiliation to 13 batteries, during peace time, of three wagons fully horsed, which in war time would be utilized in forming ammunition columns.
- (4) The maintenance in ordnance charge of three wagons, unhorsed, for each of the remaining batteries, which could also be used for forming ammunition columns in time of war.
- (5) The reduction of horses to the proposed peace establishment in all batteries east of the Sutlej, except two at Secunderabad and two at Kirkee.
- (6) The adoption of a revised war establishment of horses.
- (7) The withdrawal of spare gun carriages from batteries on the peace establishment.

The result of these proposals (which were accepted by the Secretary of State and carried out in May 1885) was an addition of 244 horses to the artillery establishment in India, and a reduction of 1,468 bullocks, involving a saving of about Rx. 7,000 per annum.

Subsequently the establishment of horses for the eight horse and eighteen field-artillery batteries required for two army corps and a reserve division was, at the instance of the Commander-in-Chief and with the approval of Her Majesty's Government, increased, in the case of horse-artillery from 165 to 198 horses, and in the case of field-artillery from 122 to 143 horses; but this change was to be carried out only in the case of operations beyond the North-Western frontier. In 1886 the Mobilization Committee brought to notice the deficiencies in the establishments needed for forming ammunition columns in war time. Five ammunition columns were shown to be necessary, and after much discussion the Government of India recommended to the Secretary of State an

increase in the number of horses for the eleven batteries of the 1st Army Corps, coupled with the reduction of two batteries to the peace strength. The proposed change gave a total addition of 279 horses to the permanent establishment of the mounted artillery in India. The result will be that, when the change is carried out, the eleven batteries of the 1st Army Corps can be placed in the field at once, and two ammunition columns mobilized for the service of the 1st Army Corps.

In connection with the formation of ammunition columns, one complete ammunition column of five units is to be supplied from the batteries of the Haidarabad Contingent, and this will be utilized for the 2nd Army Corps.

*Formation of
a company
of Burmese
sappers and
miners.*

With the sanction of Her Majesty's Government a company of "Burma Sappers and Miners" consisting one-half of Burmans, one-quarter of Shans and one-quarter of Kachins and Karens, was directed, by Clause 117 of India Army Circulars, 1887, to be raised in Burma and affiliated to the Queen's Own Corps of Madras Sappers and Miners, the native commissioned and non-commissioned officers being drawn from that corps and the British non-commissioned officers from the Bengal corps.

*Increase of
the Corps of
Guides.*

Two wing officers were, with the sanction of the Secretary of State added to the Corps of Guides from the 1st April 1885, and a third squadron, composed of a troop of Sikhs and a troop of Punjabi Mahomedans, was added on the 1st April 1887, raising the total strength of the cavalry of the corps to—

6 British officers.

13 native officers.

48 dafadars.

6 trumpeters.

402 sowars (including 8 camel-sowars).

Total 469

The grand total of all the forces in the Indian Empire, British and native, excluding volunteers, was, on the 1st of December 1884:—

Officers	...	...	...	3,612
Men	...	...	...	186,636
Horses (including mules with mountain artillery)	...	...	...	32,916
Guns	...	...	...	414

And on the 1st of October 1888 the numbers were—

Officers (including 558 staff and general duty officers)	...	...	...	3,902
Men	...	..	...	219,242
Horses (including 1,997 mules with mountain artillery)	...	...	...	33,683
Guns	...	...	...	460

These figures include local forces, but not the reserves.

Reserves.

One of the most important military measures initiated during Lord Dufferin's Viceroyalty is the formation of reserves for the native army.

Formation of reserves for the native army.

In 1885 the question of the necessity for increasing the strength of native regiments in the event of their being required for war, and of adopting some means for maintaining that strength in the field, and the obvious need for rendering our forces in India equal to the task of meeting a European foe beyond our North-West frontier, were brought prominently to notice by the circumstances of the time.

The subject had been referred to by Lord Lytton's Government in 1879 as one of the principal reasons which led them to propose the appointment of the Army Commission in that year; and in their despatch on the subject they brought to notice that India was the only large army in the world which, having no reserves, had to pay in peace time for the whole available force which it could put into the field in war.

In military despatch No. 44, dated 17th March 1885, two alternative schemes were proposed to the Secretary of State. The first followed the plan proposed by the Army Commission, under which men passed into the reserves would still belong to their respective regiments, and would rejoin them when called out, being, in effect, on long furlough, but liable to be called out for training once a year or once in two years, as might be found advisable. In the other plan it was proposed that the reserve should be territorial in character, and that the men passed into the reserve should not belong to any particular regiment, but would be called up and formed into a battalion to be stationed at some place near their homes. It was recommended that each of these plans should have a trial. Some tables were attached to this despatch showing that in the Bengal infantry no less than 43·88 per cent. were men under five years' service, and 68·34 per cent. under ten years' service, proving that whether reserves were established or not the army was a short service army, and that there must be a large number of young trained soldiers scattered all over the country who had voluntarily taken their discharge.

The Secretary of State in reply expressed himself as being opposed to the plan of creating reserve battalions, as he considered that they would fail to provide for the immediate strengthening of corps proceeding on service, or to keep their ranks supplied while in the field; but he notified his entire concurrence in the alternative or "long furlough" plan, and authorized the Government of India to give effect to it to such extent as might be deemed advisable.

The measure thus sanctioned was introduced in 1886 simultaneously with the system of linked battalions, and was limited in the first instance to the Bengal Army and the Punjab Frontier Force.

Briefly described, the following is the system of reserves instituted :

The formation of two reserve forces in the infantry has been directed, *viz.*, (i) an active reserve limited to 100 men per battalion,* and formed of men transferred after not less than 5, nor more than 12 years' service with the colors, and (ii) a garrison reserve unlimited in numbers, formed of soldiers pensioned after 21 years' service, or who have completed a total color and reserve service of not less than 21 years.

Men belonging to the latter are liable only for garrison duty within the frontiers of British India, while those of the active reserve are liable for field service with any one of the battalions linked with their own.

Men of both reserves draw full pay and good-conduct pay while embodied for training or called up for service during war, and the following rates of pay while at their homes, *viz.*,—

Havildars	...	...	Rs. 4-0 a month.
Naicks	...	...	„ 3-8 „
Sepoys	...	...	„ 3-0 „

Pensioners joining the garrison reserve draw their pension with the addition of one rupee a month for sepoy, and one rupee and twelve annas a month for havildars and naicks.

The active reserve are to be embodied for training for one month every year and the garrison reserve every alternate year.

Men of the garrison reserve become entitled to an invalid pension on completing a total color and reserve service of 25 years at the rate of three rupees and eight annas for sepoy and five rupees and eight annas for non-commissioned officers, while pensioners invalided as

* Afterwards raised to 218 men per battalion.

unfit for garrison duty, revert to their original pensions, and those of either reserve who are discharged as unfit and are not entitled to pension are allowed gratuities of from three to twelve months' full pay of rank and good-conduct pay according to their length of service.

Reserve men called out for service are supplied by Government with great-coats, havresacks, water-tins, and such other articles of equipment as the nature of the service may necessitate. They are also provided with a renewal, when required, of boots or shoes and summer clothing when called out for training; and when going to and returning from training, they are allowed free passes by rail and river.

The system of reserves was subsequently extended by India Army Circulars, 1887, Clause 43, to the Madras and Bombay armies, the numbers being limited to 160 men per battalion of Madras and Bombay infantry. The strength of the reserves of the Bengal army was at the same time raised to 218 men per battalion.

Police reserves for the native army.

In view of expediting the formation of reserves for the native army, a scheme for creating a police reserve, on the lines of the militia reserve in England, has been under consideration. The experiment is, for the present, to be confined to the Punjab: if found to work successfully there, it will be extended gradually to other provinces.

It is proposed to form the Punjab police reserves somewhat on the following conditions:

- (a) A reserve for the native army to be formed of volunteers from the Punjab police. The establishment to consist of 4,000 men, of whom 2,000 would be enrolled on the 1st April 1889, and one thousand in each succeeding year until the establishment is completed.

- (b) Enlistment in the reserve to be for general service with Punjab regiments, or in separate special corps, if necessary, with the option of enlisting for particular regiments, subject to the liability of serving with any one of the linked battalions of that regiment.
- (c) Men of between two and five years' police service to be eligible for enlistment in the reserve in the first instance.
- (d) Enlistment to be for a term of five years, with the option of re-engaging for a second term if fit and approved.

(It is to be understood that men enlisting are to remain on the rolls of the police force during the whole term of their engagement.)

- (e) Police reservists to be subject to military law whilst embodied or under training.
- (f) Police reservists to undergo a preliminary training of three months, and to be called out for training once in three years for one month. The number out for training at one time is not to exceed 800 during the months of April, May and June, and 200 during the remaining months of the year.
- (g) The training to be carried out at the nearest military station. The men to be housed or sheltered under military arrangements during training.
- (h) Arms and accoutrements for use during training to be supplied under military arrangements.
- (i) Khaki* uniform to be issued to police reservists for use during training.

* *Khaki*,--earth-colored.

- (j) Travelling expenses to and from training stations to be a military charge, and paid under military rules.
- (k) The police reservists, while out for training, to be paid at the rate of Rx. 1 per mensem. This amount to include compensation for dearness of provisions, wear and tear of clothing, &c. When embodied on mobilization, reservists to be paid under the rules for sepoys. At all other times police reservists will receive one rupee and eight annas per mensem, military pay, in addition to their police pay.
- (l) Men promoted to the rank of sergeant in the police to leave the reserve.
- (m) On an order for mobilization, one-third only of the police reserve to be called out at once. The remainder to be called out in the same proportion at intervals of four months, so as to give the police authorities time to complete their establishments.

In connection with the question of police reservists for the native army, the following matters have also come under discussion :—

- (1) The employment of native army reserve men in the police.
- (2) The employment of native army reserve men in other civil situations.
- (3) The employment of pensioned soldiers in civil situations.

A committee was assembled at Simla, in September and October 1888, to discuss and report on these questions, which are still under consideration.

Organization of the Army ; linking of battalions of native infantry ; institution of regimental centres.

Hardly less important than the formation of reserves is the change in organization which took place by the linking of battalions of native infantry, and the formation of regimental centres. *Linking of battalions of native infantry.*

The plan of substituting regiments composed of two or more linked battalions for single battalion regiments was one which was brought forward as part of a general scheme for strengthening the native army, and rendering it more capable of undertaking service beyond the frontiers of India. Under the old system when part of the Indian army proceeded on service against a foreign enemy, the regiments remaining in quarters afforded no aid towards reinforcing the ranks of those in the field, except such as could be given by the uncertain and generally insufficient process of volunteering ; whereas under the new system each battalion on service would have at least one battalion, if not two, remaining in India to act as feeders to it.

The Secretary of State sanctioned the adoption of the linked battalion system, but remarked that the full benefit of the measure could only be prospective, as men then in the service could not without their consent be transferred to one of the battalions linked with their own.

As regards the effect of the new system on the position of British officers, the Secretary of State said that it was to be hoped that the introduction of the plan of making their regimental promotion run throughout the three battalions, but not outside the regiment, would remove one of the chief defects found in the then existing organization of single corps with seven officers.

The orders for the introduction of this new organization into the Bengal army were issued in Clause 170 of

India Army Circulars, 1886, when it was stated that all enlistments in any battalion after the 1st November 1886 would be for the group of two or more battalions, and that recruits enlisted for one battalion of a group would be liable to serve in the battalions linked with it, and to be transferred thereto, if required, in case of war, any battalion warned for service being at once made up to fixed war strength by transfers from its sister battalions, the latter being simultaneously recruited to the extent required to replace the men so transferred. The depôt of the battalion on service would, when it was practicable, be attached to one of the linked battalions, which would continue to supply trained soldiers to fill the ranks of the battalion in the field during the continuance of war.

The regiments of native infantry throughout India have been linked as follows:—

BENGAL.

<i>Linked battalions.</i>	<i>Regimental centres.</i>
1st, 2nd and 3rd	... Allahabad.
4th, 5th and 6th	... Benares.
7th, 8th and 9th	... Lucknow.
10th, 11th and 12th	... Bareilly.
13th, 16th and 17th	... Agra.
14th, 15th and 45th	... Ferozepore.
18th, 33rd and 38th	... Delhi.
19th, 22nd and 24th	... Meean Meer.
20th, 21st and 26th	... Peshawar.
23rd, 32nd and 34th	{ Meean Meer, Umbal- la and Jhelum.
25th, 27th and 28th	... Rawal Pindi.
29th, 30th and 31st	... Sialkot.
35th, 36th and 37th	... Jalandhar.
39th and 40th	... Jhansi.
42nd, 43rd and 44th	... Shillong.

1st Gurkhas,	1st and 2nd Battalions	} At their own stations.
2nd ditto	ditto ditto	
3rd ditto	ditto ditto	
4th ditto	ditto ditto	

Punjab Frontier Force.

1st, 3rd and 4th Sikhs	...	Kohat.
1st, 4th and 5th Punjab Infy.	...	Edwardesabad.
2nd Sikhs, 2nd and 6th Punjab Infantry.	..	Dera Ismail Khan.
The Guide Corps	...	Hoti Mardan.
5th Gurkhas, 1st and 2nd Battns.	...	Abbottabad.

MADRAS.

<i>Linked battalions.</i>	<i>Regimental centres.</i>
1st and 4th Pioneers	... Bangalore.
2nd, 29th and 33rd	... Belgaum.
3rd, 23rd and 31st	... Trichinopoly.
5th, 16th and 27th	... Berhampore.
6th, 14th and 21st	... Bellary.
7th, 19th and 24th	... Belgaum.
8th, 12th and 17th	... Bangalore.
9th, 11th and 28th	... Madras.
10th, 25th and 32nd	... Secunderabad.
13th, 20th and 22nd	... Pallavaram.
15th, 26th and 30th	... Secunderabad.

BOMBAY.

<i>Linked battalions.</i>	<i>Regimental centres.</i>
1st, 8th and 9th	... Ahmadrnagar.
2nd, 12th and 13th	... Poona.
3rd, 5th and 10th	... Satara.
4th, 23rd and 25th	... Bombay.
14th, 16th and 17th	... Ahmadrabad.
19th, 20th and 22nd	... Nasirabad.
7th, 24th and 26th	... Mhow.
27th, 29th and 30th	... Karachi.
21st Marine Battalion	} Not linked... { Bombay.
28th Pioneers	
	} with any { Kirki.
	} other corps...

*Institution
of regimental
centres.*

The regimental centres which were afterwards decided upon are shewn above opposite the linked battalions. They were selected both with regard to the mobilization of the two army corps, and to the following points :—

- (i) That the centres should be, as far as possible, at obligatory garrisons.
- (ii) That they should be as near as practicable to the centre of the recruiting ground of the linked battalions.
- (iii) That one battalion should always be at the regimental centre.

It was not, however, found practicable to adhere entirely to the second condition in Madras, as in that presidency certain districts, in which only four and a half battalions are quartered, provide nearly two-thirds of the recruits for the whole army.

It was at first considered that it would not be advisable to notify these regimental centres in General Orders, there being reason to believe that the announcement would lead to misunderstanding; but as the Commander-in-Chief was of opinion that the publication of the scheme would popularize service in the native armies, and be productive of general satisfaction, inasmuch as it would enable men to enlist in regiments which would return periodically to the neighbourhood of their homes, it was finally decided to notify the change generally.

Measures of general organization.

Having thus dealt with the increase to the army, the various minor changes connected therewith, and the formation of reserves, it is necessary now to pass on to what may be called subjects of general organization of the British and native armies.

In military despatch No. 47, dated the 21st March 1885, the Secretary of State was asked to sanction the formation of two regiments—one of cavalry and one of infantry—to be officered wholly by native gentlemen, the posts of commandant, second-in-command and adjutant being filled in the first instance by selected native officers transferred from regular regiments, and one doing duty officer, a cadet of good family, being added, to make four officers in all.

*Proposed
formation of
two regiments
to be officered
by native gen-
tlemen.*

The Secretary of State in reply forwarded the opinions of many distinguished and experienced officers of long and varied Indian service, then in England, whom he had consulted on the broad question whether the formation of such corps was advisable or the reverse. Opinions were much divided, but the majority of the officers referred to were in favor of the proposed measure. His Lordship, however, thought some of the objections raised on the other side to be of such a nature as to require very careful consideration before so vital a change in our military system as that advocated could be adopted, and requested the opinion of the Governor-General in Council as to the practical weight of the objections, and how they could best be met if the measure were proceeded with. The Secretary of State further suggested, at the instance of General Sir Donald Stewart, that before opening the military service to native gentlemen in the manner proposed, steps might be taken, as a tentative measure, to officer two of the new cavalry and infantry regiments that had recently been authorized for the Bengal army (to be organized on the footing of the Guide Corps and localized on the Baluch frontier for the protection of the new road from Dera Ghazi Khan to Peshin) with selected native officers taken from the army at large, the two corps being combined into one regiment under the supervision of a British officer

as colonel-in-chief. While asking for the opinion of the Governor-General in Council on this proposal, the Secretary of State said that it would be essential, if regiments of this kind were raised, that they should be in substitution of such corps as could be best spared without detriment to our military strength; but His Lordship suggested at the same time that it would be well to consider whether there was no other military duty in connection with staff and departmental appointments, or the recently sanctioned reserves, in which the native officers of the army might find advantageous and honorable employment. When this reply was received, however, circumstances had changed considerably since the Government of India made their first proposal to raise two new regiments to be officered entirely by natives of India; this proposal was based on the supposition that it would be necessary to retain in Burma a portion of the Indian cavalry then in that country, and that the additional cavalry force required to replace it might appropriately take the form of a levy or local regiment officered wholly or partly by natives. It was found, however, that the time had not arrived to review the strength of the Indian army with reference to the final requirements of Burma, and that the condition of affairs in Baluchistan was not sufficiently defined to admit of any specific arrangements being proposed for establishing a levy there; it was therefore stated by the Government of India in their despatch No. 139, dated the 12th August 1887, that after a careful reconsideration of the whole question, while still of opinion that the proposals originally put forward involved an important principle which must before long be adopted, they had come to the conclusion that it was not advisable, for financial reasons, to proceed further with the particular plan at first suggested.

At the same time the Government of India expressed themselves strongly of opinion that some means should be taken to raise the status of native officers, and proposed to bestow honorary British rank, heretofore confined to a few native noblemen, on certain native officers to be selected and nominated by the Commanders-in-Chief of the several armies.

Proposed bestowal of honorary British rank on selected native officers of the Indian army.

The Secretary of State in his despatch No. 314, dated 30th November 1887, stated his conviction that it would be inexpedient to give such honorary rank to native officers employed regimentally, but he was entirely in accord with the Government of India that the bestowal of such rank on native officers serving extra-regimentally would be attended with excellent results; and he enquired whether native officers with honorary British rank could not be employed in connection with the reserve system, and on other duties such as native cavalry remount committees, &c.

The Commander-in-Chief, who was consulted, did not consider it possible at that time to find such extra-regimental employment in connection with the native army reserves or remount committees for native officers holding honorary British rank; and the Secretary of State was informed that the Government of India was not then in a position to make the experiment, but that the matter would be borne in mind.

The following is a list of the native chiefs and native officers who have been granted honorary commissions in the Indian armies:

Colonel.

The Maharaja of Jamú and Kashmir.

Lieutenant-Colonel.

The Maharao Raja of Alwar.

Mirza Ata-ullah Khan, 10th Bengal Lancers.

The Maharaja of Jodhpur.

The Maharaja of Kúch Behar.

Major.

The Nawáb of Jaora.

The Maharaj Rana of Dholpur.

The Raja of Lambagraon.

Muhammad Aslam Khan, 5th Bengal Cavalry.

Nawab Muhammad Ali Beg, Afsar-i-Jang, Aide-de-Camp
to H. H. the Nizam.

*Enlistment
of Eurasians
in British
regiments.*

In July 1886, consequent on an agitation set on foot by Eurasians in the Madras Presidency, relative to their exclusion from the military service of the State, a proposal for the freer enlistment of Eurasians in British regiments, by the withdrawal of all restrictions on enlistment except such as are enforced at home as to age, physical qualifications, marriage and so forth, was made to the Home Government.

In reply the Secretary of State forwarded correspondence with the War Office, shewing that Her Majesty's Government were so strongly opposed to the measure that he was unable to press the question; it was at the same time suggested that one or more local militia battalions composed of Eurasians might be formed.

The Government of India, in answer to this despatch, promised not to lose sight of the question of raising Eurasian militia as distinguished from permanent Eurasian regiments, concerning which they agreed in the opinion expressed by Sir Frederick Roberts and his predecessors that, as it would cost the same to maintain a Eurasian corps as a British regiment, the money would be more usefully spent upon the latter.

*Alterations
in the con-
ditions of
service in
the Haidar-
abad Con-
tingent.*

In September 1888, considerable improvements were made in the conditions of service of the Haidarabad Contingent, of which the following is a brief *résumé* :

- (i) The establishment of British officers per regiment of cavalry and infantry was increased from four to six.

- (ii) The four batteries of artillery and the four regiments of cavalry were respectively linked together; the six battalions of infantry were also linked together in two regiments of three battalions each.
- (iii) Reserves were sanctioned as for the regular army.
- (iv) Railway passes were granted to men proceeding on furlough and rejoining.
- (v) Recruits were to receive full pay from date of enlistment, and marching batta to the date of joining their corps.
- (vi) The rates of good-conduct pay and pensions and the annual allowance in aid of half-mounting were assimilated to those of the regular army.

The Government of India have had under consideration the question of augmenting the strength of garrison artillery in India by the employment of ordnance lascars, volunteers and Eurasian militia as auxiliary artillerymen, and being impressed with the necessity of increasing the strength of trained gunners at the Bombay ports, suggested to the Government of that presidency the advisability of converting the 21st Bombay Infantry (the Marine Battalion) into marine artillery, available for service both by sea and land, to act as auxiliary to the Royal Artillery.

*Conversion of
the 21st
Bombay
Infantry
into marine
artillery.*

The Government of Bombay, concurring in the proposed conversion, submitted a report indicating their views on the subject. The scheme submitted by them provided for the formation of eight regularly organized batteries, officered from the Royal Artillery.

As these proposals went much beyond what was contemplated, and the expense involved rendered them impracticable, a modified scheme was proposed to the

Government of Bombay, under which the Marine Battalion would continue to be officered from the Bombay Staff Corps, officers and men alike being instructed in gunnery; and it was proposed to give native artillery rates of pay to the men from date of conversion, and artillery uniform and equipment at the next issue of clothing.

This scheme has been accepted and detailed proposals by the Government of Bombay are now under consideration.

*Formation
of 25th Bom-
bay Infantry
into a pioneer
corps.*

The Government of India, in their military despatch No. 213, dated the 7th of November 1887, recommended, for the sanction of the Secretary of State, an application from the Government of Bombay for the conversion of the 28th Bombay Infantry into a pioneer regiment, and stated that in their opinion an increase to the number of pioneer regiments in the Indian army was very desirable.

The proposal was approved by the Secretary of State in his despatch No. 4, dated the 5th of January 1888, which sanctioned the addition of an establishment of artificers similar to that of Bengal pioneer regiments.

*Reorganiza-
tion of the
corps of
sappers and
miners.*

On the 9th of June 1881, a special committee under the presidency of Brigadier-General Hudson, C.B., was assembled at Rûrki, in pursuance of orders from the Secretary of State, to consider the question of the reorganization of the Corps of Sappers and Miners.

The proposals of the committee were, briefly, that the strength of sapper companies should be increased from 100 sepoy to 150, and a reduction made in the number of companies,—the Bengal and Madras corps being reduced each from ten companies to seven and one depôt company, or eight in all, the Bombay

corps retaining its original number, five. A fixed establishment of officers for the three corps was also proposed.

The proposals of the committee, of which the actual increase of cost was estimated to amount to Rx. 5,500 per annum, were, with some slight modifications, recommended to and approved by the Secretary of State. Subsequently an India Army Circular (clause 172 of 1886) was issued assimilating the staff allowances of the native commissioned and non-commissioned officers and instructional staff and of the establishments of followers in the three corps of sappers and miners.

In the recruiting of the army, various changes have been taken place.

Recruitment of the native army.

In September 1885, when Gúrkha recruits were required for the completion of the five authorised second battalions of existing Gúrkha regiments, negotiations were entered into with the Nepal Darbar on the subject, and an order was issued by the prime minister and commander-in-chief of Nepal, giving permission to Gúrkhas to enlist in the British service. In January 1886 recruiting depôts were formed under European officers at Sagauli, Gorakhpur, Darjiling, Pilibhit, and Bahraich. Some trouble was caused owing to Limbús and Kerantis (classes not ordinarily enlisted in Gúrkha regiments) and men who were unfit for service having been sent to the depôts in large numbers; but 2,300 recruits, Nepal subjects, were enlisted during the season 1885-86.

Supply of Gúrkha recruits for the five new battalions.

In 1886, the Secretary of State observed in his despatch No. 21, dated 4th February 1886, that both the Resident at Haidarabad and the brigadier-general commanding the Haidarabad Contingent had urged that they might be permitted to revert to the earlier practice of recruiting in Oudh and Behar. The Secretary of State was of opinion that the arguments advanced appeared to

Enlargement of the area of recruitment for the Haidarabad Contingent.

possess considerable force, more especially as it was stated that a close connection was growing up between the contingent and the Nizam's cavalry, with the effect that the former was becoming a sort of training school for the latter.

The Secretary of State was informed that the case appeared to have been stated somewhat too strongly, and that there were no grounds for apprehending that any very close connection was growing up between the contingent and the Nizam's cavalry.

Sanction was subsequently given to the admission of foreigners into the contingent to the extent of 25 per cent. of its strength, on the understanding that no enlistment of Sikhs, Panjabis, or Pathans, was to be permitted.

*Elimination
of low-caste
Hindús
from Ben-
gal regi-
ments.*

In February 1888, it was decided, at the instance of the Commander-in-Chief, that the lower classes of Hindús in the Bengal army, amounting to about 2,000 men, should be gradually eliminated, and replaced, as vacancies occurred, by Rajpúts, Jats, and men of other good fighting classes. The order for the change was communicated confidentially to officers commanding regiments, who were instructed to carry it out very gradually without injustice to the men then serving.

*Proposed
withdrawal of
companies
of hillmen
from cer-
tain Bengal
regiments.*

A proposal to withdraw from the 9th, 13th, 18th and 39th Bengal Infantry the companies of hill-men forming part of those corps was objected to by the Government of India, and on reconsideration the Commander-in-Chief withdrew it.

*Prohibition
against re-
cruiting in the
Panjab for
the Bombay
army.*

In August 1887, it was brought to notice by the Inspector-General of Police, Panjab, that, notwithstanding the reiterated instructions of the Government of India prohibiting officers of the Bombay army from recruiting in the Panjab, a party of the 20th Bombay

Infantry had visited Delhi and there enlisted Panjabis, some of whom they had previously induced to desert from the Delhi police force.

The Government of Bombay was referred to, and an explanation asked for. One was submitted by the officer commanding the regiment, which the Government of India considered extremely unsatisfactory. It was, however, left to the Government of Bombay to issue such orders as would prevent a recurrence of similar disobedience of orders, and at the same time the Commander-in-Chief in India was moved to direct commanding officers of regiments of the Bengal army to refuse to pass into the service recruits enlisted for the Bombay army in the Panjab and other prohibited districts.

The other principal changes which were carried out during the period of Lord Dufferin's Government were alterations in the trade composition, &c., of the artificers in the corps of sappers and miners; the revision of artificer establishments in pioneer regiments; the employment of master-gunners and park-sergeants in charge of armaments and stores in Indian fortifications; the revision of the rules for compensation for dearness of forage; and the withdrawal of pouch ammunition from British and native troops in India.

Changes in the trade composition, &c., of artificers in the corps of sappers and miners.

As regards the first of these, the following proposals, made by the commandant of the Bengal Sappers and Miners, as to the composition, enlistment and working pay of the artificers of the corps, were sanctioned by the Government of India in February 1887 :—

- (i) A revision in the number and distribution of trades, by which the aggregate number of artificers of the corps has been reduced from 160 to 145.

- (ii) The assimilation of the daily rates of working pay to those in force in the Royal Engineers in England; and
- (iii) The payment to the artificers of working pay at reduced rates when they are not employed at their trades, and uniform full rates on active service.

Revision of the artificer establishments of pioneer regiments.

In regard to the next point, a revision of the artificer establishment of the 23rd and 32nd Pioneers, at a cost of Rs. 1,365 per annum, was recommended to the Secretary of State and sanctioned in 1886. The establishment per company has been fixed at—

1 carpenter,

1 smith,

1 bellows or hammer-man,—all fully trained soldiers.

One carpenter and one smith in each wing, in addition to the ordinary establishment of 40 havildars, have been granted the rank and title of havildar-artificer, with a special rate of pay of Rx. 2 a month, with good-conduct pay and pension as havildars.

Employment of master-gunners and park-sergeants in charge of armaments and ordnance stores in Indian fortifications.

The third of the items above mentioned is that relating to the employment of master-gunners and park-sergeants. For many years past all armaments and stores in fortified places have been in charge of a class of non-commissioned officers styled park-sergeants. The improvements in modern ordnance and the complicated nature of the stores connected therewith necessitated the employment of a somewhat superior class of men, and the Government of India therefore decided on the appointment of master-gunners to the charge of the armaments of the more important fortifications in India.

The scheme recommended to the Secretary of State, and sanctioned by him, provides for the following

establishment of master-gunners and park-sergeants for India :—

3 first class master-gunners.
 3 second „ „ „
 9 third „ „ „
 21 park-sergeants.

These have the same pay and position as, and are entitled to all the advantages enjoyed by, similar classes in England, in respect to quarters, rations, family pay, barrack furniture, arms and accoutrements, clothing, &c.

First appointments and promotions of master-gunners throughout India are made under the orders of the Commander-in-Chief in India ; but park-sergeants are appointed by Commanders-in-Chief in each presidency, the appointment being held for three years only.

The grant of compensation for dearness of forage is the fourth point to be noted. With the view of regulating the submission by native cavalry regiments of claims to compensation for dearness of forage, rules have been framed, granting compensation on rates based on the actual average cost of feeding the horses, when it exceeds thirteen rupees and eight annas per mensem. These rules came into force on the 1st January 1883.

Rules for the grant of compensation for dearness of forage.

The last of the points referred to is that relating to the withdrawal of ball ammunition from the immediate possession of the soldier. The temptation to which the soldier was exposed by the ready access to ball ammunition, and the frequent recurrence of acts of criminal violence in recent years, having been brought to notice by the Commander-in-Chief, it was decided in 1887 that such ammunition should be withdrawn from the immediate possession of British and native soldiers in India, arrangements being made for its custody and issue.

Withdrawal of pouch ammunition from British and native troops in India.

The arrangements proposed were approved by the Government of India and notified in the Commander-in-Chief's General Orders, and the whole correspondence was forwarded to the Secretary of State. The results of the measure for the past year may be considered most satisfactory, the decrease in crime of this nature having been over 42 per cent.

Officers.

Changes affecting officers of the British and Indian armies.

During the period under review various changes have taken place in regard to the conditions of service of officers, of both the British and the Indian army. The principal measures affecting these officers will now be detailed.

Continuous service of R. E. officers in India.

It was decided by Her Majesty's Government in 1886 that the conditions under which officers of the Royal Engineers should be permitted to elect for service in India should be modified, and a Royal Warrant was issued on the 20th February in that year permitting these officers to elect for continuous service in India, with the privilege of enjoying the advantages of Indian pay and allowances, and leave and pension as granted to officers of the Staff Corps, subject to certain qualifications and conditions. A recommendation is about to be made to the Secretary of State to improve the rules at present existing.

Abolition of the appointment of Interpreter in British regiments.

By clause 134 of India Army Circulars, 1886, the appointment of interpreter in British regiments was abolished with effect from the 1st April 1887, and it was decided that the temporary appointment of an interpreter on the existing pay would be allowed to a regiment only during the first year of its service in India, an officer from another corps being appointed in the event of there being none qualified in the regiment. This measure was calculated to produce a saving of over Rx. 5,000 a year.

In July 1887, the following proposals were made to the Secretary of State in order to remedy the system under which officers appointed to native regiments on probation, and termed "attached officers," are liable to be transferred to other regiments, and removed to two or three corps in succession before they can find permanent positions, *viz.*,—

Proposed addition of a ninth and tenth officer to the permanent establishments of native cavalry and infantry regiments respectively.

- (i) The addition of a ninth officer to each native infantry regiment and a tenth officer to each cavalry regiment;
- (ii) The discontinuance (the above-noted additions being made) of the practice of appointing a probationer for the Staff Corps to fill the vacancy of an officer proceeding on furlough;
- (iii) The appointment of probationers to fill the places of absentees if more than one officer proceeds on furlough, so as to maintain the complement at eight and nine officers respectively.

The Secretary of State declined to sanction the addition of a ninth officer to the permanent establishment of each native infantry regiment, as His Lordship thought the difficulty complained of with regard to the attached officer would disappear on the introduction of the system of linked battalions. He did not however object, in the case of the cavalry, in which the system of linking corps had not been introduced, to an officer who might become in excess of the establishment on account of the return of absentees, being retained in his regiment until absorbed, provided there was within the knowledge of the Government or of the Commander-in-Chief a fair prospect of his being so absorbed within twelve months of the date of his becoming supernumerary.

On the Secretary of State's despatch being forwarded to the Commander-in-Chief for information on the general question, and for consideration and opinion as regards the cavalry, His Excellency stated that no advantage was apparent in the alternative proposal as regarded the establishment of officers for the native cavalry, and that it appeared preferable to leave unaltered the system of appointing probationers for the Staff Corps to fill vacancies caused by officers proceeding on furlough. The matter was therefore allowed to drop.

*Transfer and
promotion of
British officers
in linked bat-
talions of na-
tive regi-
ments.*

In June 1888 instructions regarding the transfer and promotion of British officers of linked battalions of native infantry regiments were, with the approval of the Secretary of State for India, issued confidentially for the guidance of the Commanders-in-Chief of the three presidencies. The chief objects of these regulations were to secure the filling of vacancies occurring in any corps by, as a rule, promotions in that corps or in one of its linked battalions, and to prevent officers permanently appointed to native regiments from being transferred to other than linked battalions of such regiments. It was laid down that vacancies in corps should be filled by transfers from other than its linked battalions only under special and exceptional circumstances, which were to be reported to the Government of India, Madras or Bombay, according to the presidency to which the corps might belong. The rules also provided for the temporary transfer of officers to the linked battalions of their regiment to fill vacancies in, or augment the establishment of, battalions on service.

*Reduction of
the period of
service for
promotion to
captain in the
Staff Corps.*

The period of service qualifying a lieutenant of the Royal Engineers for promotion to the rank of captain having been reduced by the Royal Warrant of the 8th of January 1885 from twelve to eleven years, a similar reduction was made in respect to the service for

promotion of subalterns of the Staff Corps, and with effect from the same date.

In the year 1887, an unusually large number of officers being required as probationers for the Indian Staff Corps, consequent on augmentations to the strength of the native army, and also to make good the drain caused by the operations in Burma, the Government of India proposed to Her Majesty's Government that the plan of appointing young officers direct to the Staff Corps from Sandhurst should be adopted as a permanent arrangement, for at least a part of the necessary supply. This was a modification of a proposal that had been made in 1881, when it was suggested that the Staff Corps should be recruited entirely from Sandhurst. Her Majesty's Government, however, considered it better to meet the immediate necessities of the case by the removal of certain restrictions as to age and length of service, whereby it was hoped the number of officers required for the Staff Corps would be induced to volunteer from British regiments.

Proposed recruitment of the Staff Corps direct from Sandhurst.

With his despatch No. 49, dated the 17th February 1887, the Secretary of State forwarded correspondence regarding the issue of the Royal Warrant of the 31st December 1886, for the pay, promotion and retirement of officers of Her Majesty's Army, some of the provisions of which were required to be made applicable to the Staff Corps and Indian army.

New Warrants regarding the pay, promotion and retirement of officers; and introduction of the substantive rank of colonel.

The leading points on which changes were introduced were as follow :

- (i) Revival of the rank of second-lieutenant in all arms.
- (ii) Extension of the period of compulsory retirement of captains from 40 to 45 years of age.

- (iii) Discontinuance of forced retirement of majors after seven years' service in that rank, retirement being absolute on the attainment of 48 years of age.
- (iv) Abolition of one of the two lieutenant-colonels in each regiment of British cavalry or battalion of infantry, the senior major with the battalion being granted duty pay of 1s. a day, and relieved from company duty in order to serve as second-in-command.
- (v) Majors, after two years' service in the rank, to be eligible to be selected for promotion either to full-pay or half-pay lieutenant-colonelcies, any lieutenant-colonel or major of two years' service being eligible for selection for those regimental or extra-regimental appointments which may be held by lieutenant-colonels.
- (vi) The rank of colonel only to be granted (except in the case of promotion by brevet for distinguished service) as the accompaniment of substantive employment in certain specified appointments.

The above were the principal changes which would have a financial effect as regards India; and the saving to be effected by their introduction was estimated at Rs. 43,400 per annum.

The other principal changes were the abolition of relative rank; and the cessation after the 31st of December 1887 of the grant of honorary rank to officers on retirement.

Two Royal Warrants were subsequently received dated the 2nd May and 30th April 1887 respectively—the first, amending previous warrants for the promotion

and transfer to the unemployed supernumerary list of officers of the Indian Army; and the second relating to the Indian Medical Service.

These were published in clause 153, India Army Circulars, 1887.

The Royal Warrant of the 31st December 1886 was subsequently incorporated in a later warrant dated the 15th November 1887.

The Secretary of State in his military letter No. 67, dated the 22nd of March 1888, approved of the proposals made by the Government of India that the following appointments should carry with them the rank of colonel under the terms of the Royal Warrant above quoted :—

Administrative Staff.

Secretary to the Government of India, Military Department.

Deputy ditto (Accountant General).

Ditto ditto (1st Deputy Secretary).

Secretary to the Government of Madras, Military Department.

Ditto, Bombay.

Military Secretary to the Viceroy.

Commissary-General-in-Chief.

Commissary-General.

Army Staff.

Deputy Adjutant-General.

Assistant ditto at Army head-quarters.

Ditto ditto for Musketry, Bengal.

Deputy Quartermaster-General.

Assistant Quartermaster-General at Army head-quarters.

Deputy ditto, Intelligence Branch.

Assistant ditto, ditto.

Judge Advocate General.

Director of Military Education.

Colonels on the Staff commanding stations.

Military Secretary to the Commander-in-Chief in India.

Royal Artillery.

Director General of Ordnance.
 Deputy ditto.
 Inspector General of Ordnance.
 Deputy ditto.
 Inspector General of Royal Artillery in India.
 Assistant Adjutant-General, Royal Artillery.
 Colonel on the Staff, Royal Artillery.

Royal Engineers.

Secretary to Government of India, P. W. Department.
 Chief Engineer
 Superintending Engineer } 14 of these in all.
 Appointments ranking as such
 Surveyor-General of India.
 Deputy ditto.

The Government of India, having considered the subject, in consultation with the Commander-in-Chief, in great detail, while acknowledging the receipt of the above despatch, brought to notice several points, of which the following are the chief :

- (i) It was thought that a difficulty would occur in applying the new warrant to appointments held by Royal Engineers in the Public Works Department, because civil engineers are gradually taking a larger share of the senior appointments in the department ; and the condition that 14 of the most important posts should be held by military men of a certain rank would prevent the selection of the most capable officers, if they happened to be civil engineers or junior military officers. It was also recommended that appointments to the highest posts in the department, such as Secretary to the Government of India in the Public Works Department, the Surveyor-General of India, &c., and the 14 appointments of Chief and Superintending Engineer,

should carry with them the qualification of promotion to the rank of colonel in the case of lieutenant-colonels of three years' standing, but that at the same time it should be open to the Government of India to select officers of ability and merit of any rank, and from any service, to fill those appointments.

- (ii) A similar recommendation was made with regard to the district staff and army departments, *viz.*, that while field officers of junior rank and service should be eligible for the higher appointments, these appointments should carry promotion to substantive colonel on the completion of three years' service as lieutenant-colonel, if the officer is recommended, and the promotion is finally approved at home. It was also recommended that lieutenant-colonels of less than three years' standing should be deemed eligible for the appointment of assistant-adjutant-general at army head-quarters.
- (iii) It was suggested that, in order to secure them from supersession, the cases of officers who held qualifying appointments before the 1st January 1887, but were promoted subsequently to that rank, and who would fail to obtain the rank of colonel under either the old or the new warrant, should be specially considered.
- (iv) With regard to the Secretary of State's objection to include superintendents of factories and ordnance officers of the first class in the list of qualifying appointments, it was remarked that similar manufacturing appointments at home carry the rank with them; and that it was advisable that power should be given to select a certain number of these officers for promotion.

- (v) The opinion was given that the Adjutants-General and Quartermasters-General of the three presidencies, the Inspector-General of Cavalry, and all brigadier-generals should be included in the list of qualifying appointments, as otherwise there would be no authority for their appointment as substantive colonels.
- (vi) Objection was taken to the proposal that brigade commands should in future be held by officers of the permanent rank of major-general, as being disadvantageous on account of its tendency to throw such commands into the hands of older officers than those who hold them now.
- (vii) It was said that, in the opinion of the Government of India, the extension of the field of selection for staff officers, so as to include officers not on the Indian establishment, should be confined to appointments qualifying for the substantive rank of colonel.
- (viii) The following difficulties in connection with the working of the Warrant were also brought to notice :
 - (a) The deficiency of colonels of the British cavalry and infantry to be employed in India.
 - (b) The uncertainty regarding the precedence of colonels under the general rules in force ; and as to whether it is intended to promote in future only officers holding the substantive rank of colonel to be major-generals.
 - (c) The exact nature and privileges of the new rank of substantive colonel not being clearly defined. It was said that, as far as the

matter was understood, the introduction of this rank might with advantage have been omitted from the measure.

- (d) The difficulty experienced in finding lieutenant-colonels of three years' standing to fill the post of assistant adjutant-general.

No reply has as yet been received to this despatch.

Having in view the difficulty that would be felt, in the event of the mobilization of a large portion of the Indian forces, in providing officers for duty on lines of communication and with the commissariat, transport, and other departments, the Government of India have taken into consideration the question whether it could not be met by forming a reserve of officers in India. A committee was assembled in August 1888, to discuss the question and put forward definite proposals on the subject; and on their recommendation it was decided that a circular letter should be addressed to officers commanding volunteer corps, to commissioners and district officers, and to local heads of departments, such as forest, police, public works, &c., specifying the terms (which were set forth in detail by the committee) under which a reserve of officers would be formed for service in case of great national emergency, and asking that it might be ascertained what officers and others would be prepared to accept commissions at once in such reserve.

*Formation of
an Indian
reserve of
officers.*

Under an order of 1884, military officers in civil employ are struck off the effective list of the army after ten years' absence from military duty. It has now been ruled that all officers accepting civil employment on or after the 1st November 1887, will be required to retire from the service on being superannuated under civil

*Retirement of
military
officers in
civil em-
ploy.*

rules, so that the retirement of these officers at the age of 55 is compulsory.

*New leave
rules for the
Indian Staff
Corps.*

One of the most important changes in the conditions of service of officers of the Indian army was the introduction of the new leave rules. In the latter part of 1884 the Government of India submitted a proposal to the Secretary of State for India to amend and simplify the leave and furlough rules for the Indian army, which, owing to the various sets of rules then in force, had become excessively complicated and difficult to administer.

The Secretary of State would not accept the proposed rules in their entirety, the chief points of difference being as follow :—

(i) The Government of India had urged the removal of the restriction as to longitude placed on the short leave granted under the rules of 1875, so as to enable officers to go home for six months at a time on Indian rates of pay and allowances and half staff salary ; (ii) they had deprecated any extension of the existing rules in the way of giving longer leave in India ; and (iii) they recommended the maintenance of the system of furlough allowances, based on Indian pay and salary, in lieu of the scale of furlough allowance in sterling based on length of service.

None of the above recommendations were accepted by the Secretary of State, who requested the adoption of a code of rules which had been prepared at home in substitution of those proposed by the Government of India.

The new rules were promulgated in clause 51, India Army Circulars, 1886.

Their chief features are as follow :—

(i) Officers can obtain leave at any time, limited to a period of one year in the first instance,

in or out of India, without reference to length of service or amount of leave already obtained, solely at the discretion of the authority granting the leave.

(ii) All leave in or out of India counts as service for pension.

(iii) Fixed rates of furlough pay in sterling are laid down commencing at £200 a year after appointment to the Staff Corps, and rising to £700 a year after 30 years' service for pension.

In October 1888, the Government of India sanctioned the extension to general officers in Burma of the grant of ninety days' special privilege leave, which had already been accorded to all other officers who had served in the war.

Grant of 90 days' privilege leave to General and other officers in Burma.

In reporting this to the Secretary of State, the Government of India also submitted, with their support, a recommendation from the Commander-in-Chief that the indulgence of an annual grant of ninety days' privilege leave, at present restricted to officers of local corps serving in Assam, Baluchistan, and a few specified stations situated beyond the Indus and in Rájputana, should be extended to all officers serving in Burma. The recommendation was based upon the isolation of life in Burma, the great expense of living there, the unhealthiness of the climate in many parts, the absence of sanitarium to which officers could betake themselves on short leave, and the difficulty of communication.

Distribution of the Army.

Having thus dealt with the strength and organization of the army, it is necessary now to detail the changes which have taken place in the distribution of the troops of the Indian army during the period of Lord Dufferin's

Distribution of the Indian army.

Viceroyalty; and although these changes have not been of a very extensive character, yet the policy has been steadily pursued of withdrawing isolated detachments from unimportant stations, when the state of the province or district has admitted of this being done.

The following is a list of military stations which have been abandoned as such, or at which the garrisons have been either reduced or increased :—

Gandakindaf (Balúchistán).—The military post at this place has been abandoned.

Loralai (Balúchistán).—This place was selected as the site for a cantonment in the Bori valley, and its garrison, together with that of the adjoining posts, was fixed at—

Loralai Cantonment ...	{	One native mountain battery.
		Three squadrons of native cavalry.
		Seven companies of native infantry.
Sinjawí ...		One company of native infantry.
Gambaz ...		One troop of native cavalry.
Thal-Chotiali ...		One troop of native cavalry.

Mach (Baluchistan).—This outpost was abandoned.

Fort Abazai (Peshawar Frontier).—The garrison was permanently reduced from 50 cavalry and 86 infantry under a British officer, to 25 cavalry and 50 infantry under a native officer.

Kaludanda (North-Western Provinces).—A new cantonment has been formed for the accommodation of the 2-3rd Gúrkha Regiment.

Gorakhpur (North-Western Provinces).—The garrison has been withdrawn, but the cantonment is still retained under the military authorities.

Fortress Gwalior was given back to the Maharajah Scindia.

Morar.—This cantonment was abandoned on the rendition of Fortress Gwalior to Scindia.

Jhansi (North-Western Provinces).—The rendition of Fortress Gwalior to Maharaja Scindia necessitated an increase to the garrison of Jhansi. Sanction was accordingly given to increase the garrison from three companies of British infantry and one regiment of native infantry to—

1 heavy battery, Royal Artillery.

1 field „ „

1 British infantry regiment.

1 native cavalry regiment.

2 native infantry regiments.

The actual garrison, however, at Jhansi is—

1 heavy battery, Royal Artillery.

3 companies of British infantry.

2 regiments of native infantry.

A field battery will be sent from Barrackpur to Jhansi in the course of the next relief.

Lalitpur (North-Western Provinces).—The cantonment was abandoned, the garrison being withdrawn.

Banda (North-Western Provinces).—This place was abandoned as a military station, the garrison being withdrawn.

Sipri (Central India).—A detachment of one company from the regiment of British infantry at Jhansi was sanctioned for this station.

Sitapur (Oudh).—The detachment of native cavalry was withdrawn without relief.

Faizabad (Oudh).—The regiment of native cavalry at Morar was transferred to Faizabad on the rendition of Fortress Gwalior to Maharaja Scindia.

Eastern Frontier District.—The following distribution of the troops in the Eastern Frontier District was definitely sanctioned in April 1888 :—

Dibrugarh.—Half battalion of Gúrkha Light Infantry (head-quarters at Shillong).

Kohima.—Half battalion of Gúrkha Light Infantry with two mountain guns attached (head-quarters at Manipur).

Cachar.—A battalion of Bengal infantry.

No orders were passed as regards the garrisons of Shillong and Manipur.

Nimach (Rajputana).—The British infantry garrison was permanently reduced from three to two companies, the number of companies with the head-quarters of the regiment at Nasirabad being increased to six.

Dharwar (Bombay).—The detachment has been permanently withdrawn.

Vellore (Madras).—The native infantry garrison has been reduced to two companies.

Malabar District.—The number of British troops in the Malabar District was reduced to 350 rank and file, the head-quarters and remainder of the British infantry regiment at Cannanore being transferred to Wellington.

The garrisons at the undermentioned stations were increased to the extent noted against each, in consequence of the augmentations of the British and native armies sanctioned by the Secretary of State between the years 1885 and 1887 :—

Mhow	... 1	horse artillery battery.	
Kirkee	... 1	field artillery	"
Bellary	... 1	"	"
Darjiling	... 1	mountain battery.	"
Murree	... 1	"	"
Quetta	... 1	garrison battery (temporarily at Rurki).	
Karachi	... 1	"	"
Bombay	... 1	"	"
Aden	... 1	"	"
Fort William	... 1	"	"
Rangoon	... 1	"	"
			Poona.
			Rurki.
			Barrack-
			pur.
			Rurki.

Jalandhar	...	1	regiment of native cavalry.
Ferozepur	...	1	” ” ”
Jacobabad	...	1	” ” ”
Jhelum	...	1	regiment of native infantry.
Ferozepur	...	1	” ” ”
Jalandhar	...	1	” ” ”
Sialkot	...	1	” ” ”
Dhurmsala	...	1	” ” ”
Dehra Dun	...	1	” ” ”
Bakloh	...	1	” ” ”
Abbottabad		1	” ” ”

In addition to the above, the three extra battalions of British infantry ordered out in 1885, had to be provided for. They have been practically absorbed in garrisoning Upper Burma.

The state of affairs in Upper Burma, the districts *Garrison of Burma.* being overrun by dacoits and insurgents, rendered it necessary to send large reinforcements thither in 1886. But after the operations of the cold season of 1886-87, the country quieted down very considerably, and owing to this circumstance and to the increase of the military police force, it has been found possible to reduce gradually the number of troops. During the hot season of 1888 the garrison of Upper Burma consisted of—

- 1 garrison battery (British).
- 2 native mountain batteries.
- 3 companies of sappers and miners.
- 2 regiments of native cavalry.
- 3 battalions of British infantry.
- 12 battalions of native infantry.

In Lower Burma there were—

- 1 garrison battery (British).
- 2 battalions of British infantry.
- 4 battalions of native infantry.

The force maintained in Burma will be reduced this winter (1888-89) by two if not three battalions of native infantry. Three levies (Shan States, Chin Frontier, and Mogoung) are now in process of formation for service in that country; these are to be local corps for the defence of particular tracts.

Proposed localization of certain Bombay regiments in Baluchistan.

On the 8th June 1888 the Government of India, in their military despatch No. 93, forwarded for the consideration of the Secretary of State a proposal to localize two battalions of Bombay infantry and one of Bombay cavalry in Baluchistan, organizing them as one linked regiment on the footing of the Corps of Guides, forming them entirely of men enlisted above the passes, and eliminating the Hindustanis, as it was considered important to secure a new element for the army in the border tribes, who would enlist only for really local regiments and under native officers of their own tribes.

The Secretary of State in reply, observed that the Government of Bombay were strongly opposed to the proposed change in organization of a portion of the army under their immediate control, and held his decision in abeyance pending the result of the larger question of general army organization submitted with Military despatch No. 87, dated 1st June 1888.*

Two important subjects remain to be considered,—the volunteer forces of India, and the formation of the Burma military police and levies.

Volunteers.

Grant of certain concessions to the Volunteer Forces.

Several proposals for the encouragement of the volunteer movement in this country had been under the consideration of the Government of India since 1883, and

* This refers to the proposed abolition of the presidential army system. (*Vide* Chapter II of this Volume.)

in June 1885 Lord Dufferin decided that the following advantages should be conceded to the volunteer forces of India, with a view of increasing their efficiency and making the movement more popular:—

- (a) The grant of permission to obtain from the Ordnance Department, at half-price, any ammunition required for practice and match-shooting.
- (b) The grant of an allowance of Rs. 10 a month to each volunteer corps of over 300 members, towards the maintenance of a band.
- (c) Permission to adopt scarlet uniform, and draw an allowance of five rupees per efficient volunteer for its provision.
- (d) The grant of a medal to the best shot amongst the volunteers in each province of India, in addition to that given for the best shot in each presidency.

Besides the above, the Government of India decided, with a view to its better administration, that the volunteer force should be transferred from the control of the civil to that of the military authorities. *Transfer of the volunteers to the control of the military authorities.* The volunteers in the Bengal Presidency were accordingly placed under the control of the Commander-in-Chief in India, and the volunteer corps in the Bombay Presidency under the local Commander-in-Chief. On the recommendation of the Madras Government, the volunteer forces in that presidency were not then transferred to the Commander-in-Chief of the Madras Army, but the transfer has since been carried out at the request of Sir Charles Arbuthnot, and it is now under the consideration of the Government of India to similarly transfer the few remaining corps (such as

those at Haidarabad, in Burma, &c.), to the control of military authorities.

*Formation of
Volunteer re-
serves.*

In March 1885, a scheme was adopted for the organization of a Volunteer Reserve in India, with a view of enrolling all persons unable or unwilling to join active volunteer corps, and thereby to secure, for military service in case of emergency, as many as possible of the civil population of India. This measure was the outcome of certain proposals made many years ago by Lieutenant-Colonel Collen, and subsequently by Colonel Grey and by Lieutenant-Colonel Rivett-Carnac, for increasing the force of armed Europeans and Eurasians in India. The proposals made by the two first-named officers embraced the formation of an Anglo-Indian militia. Colonel Rivett-Carnac recommended the enlistment of all European adults, capable of bearing arms, either in the volunteers, or as militia, or as "special constables," and, after this, the formation of the remainder, who were unable or unwilling to join the active force, into a reserve. These recommendations could not be adopted in their entirety, but the Government of India approved of the proposal to form a volunteer reserve, to consist of all persons unable or unwilling to join the active force. Sanction was accordingly given to the formation of volunteer reserves in the North-Western Provinces, and, at the same time, local governments were requested to take measures to bring the system into force in their respective provinces. Volunteer reserves have been organized in the provinces of Bengal, in Calcutta, Madras and Bombay, in the North-Western Provinces, in Burma, and in connection with Indian railways; and steps are now being taken to extend the movement to the provinces of the Panjab. Thus, during the years 1885 to 1888, the volunteer force of India, besides being

considerably increased, has been supplemented by a reserve force as follows :—

Presidency Volunteer Reserve Battalion.

Bengal Provincial Volunteer Reserves.

Bombay Volunteer Reserve Battalion.

North-Western Provinces Reserves.

Madras Volunteer Reserves.

Railway Volunteer Reserves.

Burma Volunteer Reserves.

Panjab Volunteer Reserves (in course of formation).

From the nature of the reserves, it was found impossible to lay down any complete code of general regulations for their guidance, but the following conditions were established as applicable to all reserves :—

- (a) That reservists should be armed with Martini-Henri rifles, and supplied with 50 rounds of ammunition annually free of charge.
- (b) That a capitation grant of Rx. 1 a year should be allowed for each efficient volunteer, the musketry test of efficiency being the ability to place three out of five shots on a target four feet square, at each of the three distances of 100, 200 and 300 yards, in a standing, a kneeling, and a lying-down position respectively.
- (c) The wearing of uniform was not made compulsory, but a grant of five rupees was authorized for each volunteer reservist supplying himself with uniform.

In February 1887, the Government of India decided to form an unattached list for volunteer officers, to enable those who were compelled by circumstances beyond their control to sever their connection

*Formation of
an unattached
list of volun-
teer officers.*

with a volunteer corps to retain their position in the volunteer forces. Under these rules a volunteer officer compelled to leave his corps owing to a change of station, may be retained for a period of two years as a supernumerary on the rolls of his corps or of any other corps at his new station, and, should he not be brought on the establishment of a corps at the end of that period, he is eligible for transfer, for a further period of three years, to the unattached list, during which period he may be admitted into any corps in his old rank.

*Grant of
honorary
promotion to
volunteer
officers.*

Volunteer officers have also been granted the privilege of steps of honorary promotion after certain periods of service, as well as a step of honorary promotion on retirement under certain conditions.

The adoption of the above measures has resulted in a considerable increase in the volunteer forces of India and in the formation of volunteer reserves in different parts of the country. In the beginning of 1885, there were about 13,500 volunteers in India, while by the autumn of 1888 the numbers had risen to nearly 18,500. During the same period the total number of volunteer corps in India and Burma increased from 54 to 73.

*Lord Dufferin's
address
to the Cal-
cutta Volun-
teers in 1885.*

Lord Dufferin has always taken a great interest in the development of the volunteers in this country, and has publicly expressed this interest on various occasions. On the 7th March 1885, on the occasion of the distribution of prizes to the Calcutta Volunteers, His Excellency spoke to the following effect:—

“COLONEL GRAHAM, OFFICERS, NON-COMMISSIONED OFFICERS AND MEMBERS OF THE CALCUTTA VOLUNTEERS,—It is scarcely necessary for me to assure you that it is with the greatest pleasure that I have come to take part in to-day's celebration. One of the first things that struck me, on my arrival in Calcutta, was the

admirable appearance you presented when formed up as a guard-of-honor at Government House, to salute the arrival of the new Viceroy; and I was much pleased to learn that among the customary privileges attaching to my post, was that of being your honorary colonel. It is a position any one might be proud to occupy, and I am glad to have the opportunity of telling you how deeply I appreciate it. If sympathy with the objects for which you are enrolled, and a sincere desire to promote your efficiency and advance your interests, is any qualification for such a post, I have no misgivings as to my being entitled to fill it. It so happens that for many years it has been my duty to assist in the self-organization of our citizen soldiery in different parts of the world. I was an original member of the British National Rifle Association, and a constant frequenter of the camp at Wimbledon. In Canada, bodies constituted very much like your own form the national force of the country. I am glad to find, on arriving in India, that the same ardent and martial spirit which has already filled England with three or four hundred thousand marksmen, and, I may add, efficient soldiers, for the protection of her coasts and homes, has evoked in these distant lands a kindred organization. Of this, at all events, I am sure that should Her Most Gracious Majesty ever call upon you to assist in maintaining the domestic peace of the country, while her regular armies are engaged in encountering a foreign foe upon her frontiers, you would respond to the call with eagerness and alacrity, and it cannot but be satisfactory to you to remember that the trouble and self-sacrifice you have imposed upon yourselves, in submitting to military discipline and organizing your ranks, is storing up, on behalf of the community at large, a reserve of effective strength which at any moment may become most valuable, and that you are thus conferring upon the country a real and practical benefit which cannot fail to be appreciated by your fellow-citizens of all classes."

The Burma Military Police.

In February 1886, it was decided that the best measure to adopt for the suppression of the numerous bands of dacoits with which Burma was overrun, and for the general pacification of the country, was the augmentation of the police force; and, as the native Burmese

Formation and subsequent augmentation of the Burma military police.

police were unable to cope with the dacoits, it was found necessary to raise the required force in India. Accordingly, in March 1886, orders were issued for the raising of two levies and a force of military police, the former to consist of Gúrkhas, Panjabis and Hindustanis, each 561 strong (*i.e.*, 11 native officers, 50 non-commissioned officers and 500 men). The military police were to be raised in Northern India, of a total strength of about 3,300, of which 2,000 privates with a proportion of native officers and non-commissioned officers were for service in Upper Burma, and 1,000 men, with a similar proportion of the upper grades, for Lower Burma. The men were recruited by British officers selected to command the levies, and by officers of the North-Western Provinces and Panjab police. The native commissioned and non-commissioned officers and a portion of the men were volunteers from the army; and volunteering for the police levies was opened to all classes serving in the Bengal infantry regiments except Gúrkhas.

In July 1886, orders were issued to raise two additional police battalions (each 561 strong) for service in Upper Burma; the first battalion to consist of Panjabis, partly volunteers from the army and partly newly-enlisted men, and the second battalion of volunteers from the 42nd and 44th Bengal Infantry (Assam regiments) and from the Assam police battalions. A commandant and an assistant-commandant were appointed to each of these battalions.

In October 1886, sanction was accorded to the raising of 2,000 additional military police for service in Upper Burma,—1,000 to be obtained by volunteering from Bengal and Bombay regiments then serving in Burma, and 1,000 by volunteers from such of those regiments as were under orders to return to India in the spring of 1887.

It was, however, eventually decided to raise this force from volunteers from the native armies of the three presidencies, including the troops serving in Burma, and as the whole of the men could not be obtained from the native army, deficiencies had to be made up from reserve police battalions.

In December 1886, it was decided to raise 4,000 additional police for service in Upper Burma; 3,000 of this force, with the necessary complement of native officers, were raised in the Bengal presidency, at Amritsar, Lucknow and Allahabad, and the remaining 1,000 in the Bombay presidency. The native commissioned and non-commissioned officers, were allowed to volunteer from the army, receiving a step of promotion on joining the police, the privates being recruited from the civil population.

In the early part of 1887, a military police battalion of 500 men was raised for service in the Kobo Valley and the Upper Chindwin district, consisting of volunteers from the 42nd and 44th Bengal Infantry and of newly-enlisted men (Jharwahs, Kacharis, Kukis and other tribes) with a British commandant and an assistant commandant.

In March 1887, an order was issued for the raising of an additional force of 4,000 men in the Bengal and Bombay presidencies, to be retained as a reserve in India until October 1887. Of these 3,000 were raised in the North-Western Provinces and Oudh, and the remainder in the Bombay presidency, the former being recruited from the civil population and limited to *bonâ fide* Hindústanis, to the exclusion of Panjabis. The whole of the native officers and one-half of the non-commissioned officers were supplied from the Hindústani regiments of the Bengal army.

In addition to these, measures are now in progress to raise three additional levies for service in the Shan States and Mogoung, and on the Chin frontier. These levies will be constituted as follows :—

Shan States levy	... 600 Panjabis.
Mogoung levy	... 500 Gúrkhas and hill men.
Chin levy	... 400 Panjabis and 200 Hindustanis.

Seven hundred of the Panjabis required for these levies will be taken from the railway police battalion now in Burma, and will be replaced by a similar number of Hindústanis, now being enlisted.

The total number of Indian police sanctioned for Upper Burma amounts to about 18,500.

The raising, equipment and despatch to Burma of these several levies, together with the adjustment of the conditions of service of the men, their furlough, pay and pensions, and the settlement of numerous minute but important particulars, the determination of which was necessary to the efficiency of these bodies, proved to be a business of great labour, and very sensibly increased the pressure on the Military Department.

Lord Dufferin's acknowledgment of the services of the military police in Burma.

The military police have done excellent service against the dacoit bands, and have aided greatly in the pacification of Upper Burma. Their services in restoring order were acknowledged by Lord Dufferin in a speech delivered by him in Council on the 27th July 1887, which is here introduced as an appropriate conclusion to this chapter. His Lordship said :—

“Before putting these amendments,* I should be glad to take the opportunity, which as yet I have not had, of expressing on behalf

* At the Legislative Council, held at Simla on Wednesday, the 27th July, the Bill for the Regulation of Military Police in Burma was taken into consideration and subsequently passed into law. Mr. Peile explained that the object of the Bill was to repeal the military police regulation which was introduced into Upper Burma in January last, and to put the military police under the same law in Upper and Lower Burma. Mr. Peile also moved a number of amendments in the original bill, which were merely additions or alterations to make the meaning clearer.

of my colleagues in the Government of India, the great satisfaction with which we have observed the manner in which the Indian military police of Burma have discharged their difficult and arduous duties from the date they were despatched to that country. Although from time to time the Government of India, through the Home Department, has conveyed to the officers, European and native, of that corps, various indications of their approval, I do not think that any very formal recognition of their services has as yet been made. There is no doubt that the duties which have fallen to their share have been as arduous, as dangerous, and as trying to their health as those to which the military forces of Her Majesty in Burma have been exposed ; and both in regard to the physical courage and patience which they have displayed, and to their discipline and obedience to command, they have in no degree fallen behind the other police forces of India. Indeed, on several occasions the military police of Burma have distinguished themselves in a very remarkable manner, and, on more than one occasion, individual native officers have shown extraordinary bravery and enterprise.

“I entirely agree with the observations which have fallen from my hon’ble colleague, Mr. Peile, that it is of the most essential importance that this force should be worked up to a very high level of military discipline. We must remember that it discharges its duties under very peculiar conditions. It is a force sent to Burma for the purpose of maintaining the domestic peace of the country, but at the same time it is composed of men who are alien in race, in religion, and in language to the population amongst whom they exercise their duties. Consequently, unless there is introduced into the force the bonds of a very strict military discipline, there might be a danger lest it should transgress the proper limits of police action. Thanks to the judicious and practical recommendations of the Commander-in-Chief, when he was in Burma and had an opportunity of observing both the defects as well as the good qualities of the force as it was then constituted, the Government of India, acting by his advice, was able to introduce into Upper Burma those improvements and those special arrangements which, in consequence of their successful operation, my hon’ble colleague is now anxious to extend to the force in Lower Burma. It is satisfactory to think that the alterations about to be applied to the organization and composition of the

force in Lower Burma have successfully operated in the Upper Burma police force.

"I do not think it will be necessary for me to re-read the various amendments proposed by my hon'ble colleague, and therefore I shall proceed to put them *en bloc*."

CHAPTER IV.

THE MOBILIZATION OF THE ARMY.

In the early part of 1885, consequent on the threatening aspect of political affairs in Europe and the probability of an early rupture with Russia, it was found necessary to reinforce the garrison of Quetta, and to take measures for organizing a force for service in Baluchistan and on the Afghan frontier.

*The special
war preparations of
1885.*

On the 21st March, the Commander-in-Chief in India was asked to organize a force of three divisions (about 25,000 strong) for service in Baluchistan, with a strong division in reserve, the troops to compose the force being drawn in proportions from the armies of the three presidencies. The Commander-in-Chief proposed that the force should consist of two army corps and a reserve division,—the first army corps to consist of two divisions of infantry and one of cavalry, each of three brigades, and the second of two divisions of infantry and two brigades of cavalry; the reserve to represent half an army corps.

These proposals were agreed to, and a force as detailed below was organized for service accordingly—

1st Army Corps.

- 13 batteries of artillery (one native).
- 6 companies of sappers and miners.
- 3 regiments of British cavalry.
- 8 regiments of native cavalry.
- 12 battalions of British infantry.
- 14 battalions of native infantry (of which two were pioneers).

2nd Army Corps.

- 10 batteries of artillery (one native).
- 6 companies of sappers and miners.
- 2 regiments of British cavalry.
- 6 regiments of native cavalry.
- 12 battalions of British infantry.
- 14 battalions of native infantry (one of pioneers).

Reserve.

- 5 batteries of artillery (one native).
- 3 companies of sappers and miners.
- 1 regiment of British cavalry.
- 3 regiments of native cavalry.
- 6 battalions of British infantry.
- 7 battalions of native infantry.

The strength of the force was :—

		Men.	Guns.
1st Army Corps	...	28,000	78
2nd Army Corps	...	25,000	60
Reserve Division	...	13,000	30
		<hr/>	<hr/>
Total	...	66,000	168

with 13,000 horses.

Arrangements for placing this force in the field were completed during the month of April 1885, and it was ready to move into Baluchistan towards the end of that month; the movement, however, eventually became unnecessary, and in May the Commander-in-Chief was instructed that only the regiments and batteries composing the 1st army corps need be held in readiness. The force was subsequently reduced to two brigades of cavalry and six of infantry, with sixty guns, the whole organized in two divisions; and later on orders were issued to de-mobilize the force.

*Schemes of
mobilization.*

The subject of mobilization is one which has, from time to time, for many years past, been under consideration in the Military Department. As far back as 1875, a scheme of mobilization was laid before the Government of India by the present Secretary in the Military

Department, who again in the following year drew attention to this important subject. In 1877-78, when he was in the Intelligence Department at the Horse Guards, he once more, in connection with a project for a campaign in Egypt and the employment of an Indian Contingent in that country, drew attention to the want of a pre-arranged plan of mobilization. The Secretary of State for War and the Secretary of State for India supported the recommendations then made, and the latter addressed a request to the Government of India that the initiatory step of preparing the needful tables of composition, equipment, carriage, &c., for brigades, divisions and army corps, might be taken without delay.

In 1877 the subject again came under consideration in connection with the need of preparation for war with Russia. On that occasion, at the request of Lord Lytton, some valuable notes and tables were drawn up by Colonel (then Major) Crookshank and Colonel (then Captain) Deane, in which various details regarding equipment, supply, transport, &c., were very carefully worked out, on the basis that it might be necessary to place a considerable force (30,000 men) in the field beyond the North-West Frontier.

The subject was next considered by the Army Organization Commission of 1879, who dealt with the matter in considerable detail, and strongly advocated the formulation of plans for mobilization, the want of which was afterwards very clearly demonstrated during the war preparations of 1885, already described.

In 1886, the present Secretary again brought the subject under notice, taking advantage of the proposals made by the Commander-in-Chief for the redistribution of the garrison of India, one of the leading features of which was the idea that it might be requisite to place a force, consisting of two army corps

and a reserve division in the field on the North-West Frontier. A small committee had been formed in the Quartermaster-General's Department, to discuss the preparation of a scheme for mobilization to follow the redistribution of the army; but on the 22nd July 1886, the Secretary in the Military Department, in a memorandum reviewing the whole question of mobilization, and dealing with all the points which would have to be considered, submitted that a small departmental committee was not a suitable agency for carrying out a great work of this kind, and advised that a general mobilization committee should be constituted under the orders of the Governor-General in Council. Lord Dufferin, giving the subject his earnest consideration, entirely approved the recommendations made, and in a Resolution of the Government of India, issued on the 28th August 1886, the following orders were passed:—

*Formation
of a general
mobilization
committee.*

- (1) That the following standards of organization be adopted for service,—*viz.*, army corps for service beyond the frontier, and divisions or brigades of all arms, according to circumstances, for service within the frontiers of India or beyond sea.
- (2) That the composition and strength of the army corps, and all arrangements for mobilizing two army corps, be first worked out.
- (3) That for the above purposes a permanent General Mobilization Committee be established; sub-committees being appointed as might be decided by the Committee.
- (4) That the General Mobilization Committee be constituted as follows:—

His Excellency the Commander-in-Chief in India.

The Hon'ble the Military Member of the Council of the Governor-General.

The Secretary to the Government of India, Military Department.

The Adjutant-General in India.

The Quartermaster-General in India.

The Surgeon-General, Her Majesty's Forces, Bengal.

The Surgeon-General with the Government of India.

The Director-General of the Post Office.

The Director-General of Telegraphs.

The Surveyor-General of India.

The Commissary-General-in-Chief.

The Deputy Adjutant-General, Royal Artillery in India.

The Director-General of Railways.

The Director of Army Remount Operations for India.

The Inspector-General of Military Works.

The Deputy Adjutant-General

The Director-General of Ordnance in India.

The Accountant-General, Military Department.

The Deputy Secretary to the Government of India, Military Department.

The Deputy Quartermaster-General, Intelligence Branch.

To these were afterwards added the Inspector-General of Artillery and the Inspector-General of Cavalry. Major E. R. Elles, R.A., was appointed Secretary to the Committee.

Sub-committees were afterwards appointed to work out the several portions of the scheme coming under the various heads of organization, mobilization, lines of communication, commissariat, &c., &c.

In reporting the initiation of the scheme to the Secretary of State in military despatch No. 151, dated the 27th September 1886, and mentioning the different standards of organization adopted, it was remarked that the necessity for working out all details on the basis of existing conditions would be insisted on.

The Secretary of State, in acknowledging the receipt of the papers, forwarded a letter from the War

Office, in which it was said that the Secretary of State for War had read the papers with much interest, but wished to record his strong opinion that, while India might rely on every assistance being afforded by England in the event of an emergency, any scheme for the mobilization of the army in India should be based on existing conditions, and that it would be dangerous to ignore the contingency that the circumstances of the moment might render it necessary to make considerable military preparations at home. The Secretary of State said he understood this to be entirely in accordance with the views of the Government of India as to the necessity for working out all the details of the mobilization on the basis of existing conditions, a measure which had his entire concurrence.

*Formulation
of general
regulations
for mobilization.*

Copies of the general regulations for mobilization and of field service manuals under the various heads of "Commissariat," "Medical," &c., &c., together with a general summary of the business done by the mobilization committee up to the 1st August 1887, were forwarded to the Secretary of State in military despatch No. 180, dated the 10th October 1887, with remarks in detail showing the principles which had been followed in preparing the Regulations, and what the most prominent requirements would be in the event of mobilization being ordered: and attention was invited to a schedule attached to the general summary, showing that, after eliminating everything which it was thought might wait until mobilization was imminent, an outlay of about Rx. 220,000 would be necessary to place the various services on such a footing as to admit of an army corps being mobilized. This expenditure was chiefly on account of transport, horses, and reserves of clothing, an expenditure of about Rx. 20,000

annually being sufficient to keep up the reserves on the required scale.

It was also remarked that although the work accomplished by the Mobilization Committee was of great practical value and importance, it could not be regarded as final, and that it would be necessary year by year to consider, revise and supplement the Regulations. To that end it was proposed that an officer of the Quartermaster-General's Department, at head-quarters, should be permanently charged with the duty of overlooking the whole business. In a despatch of 1888, the Secretary of State expressed concurrence in the view that an officer of the head-quarters staff should be the Secretary of the permanent Mobilization Committee, but he thought the duty might appropriately be confided to the assistant-adjutant-general for Royal Engineers authorized in connection with the re-organization of commands and staff.

In military despatch No. 203, dated 31st October 1887, it was brought to the notice of the Secretary of State that in the event of the actual mobilization of two army corps, an immediate augmentation of 250 officers would be required for the Indian army in order that the number of British officers with native infantry regiments might be increased from eight to twelve, and that provision might be made for fifty officers for the charge of depôts of native cavalry regiments proceeding on service, and for the additional officers required for the various duties connected with the army, more especially in the commissariat and transport departments, and on lines of communication.

*Question of
and to be
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actual mobi-
lization be-
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sary.*

The Secretary of State subsequently, in his despatch No. 119, dated the 17th May 1888, forwarded correspondence with the War Office, in which the Secretary of

State for War commented on the fact that the scheme was not based entirely on the resources at the immediate disposal of the Government of India, but reckoned on receiving from home 700 officers and 13,000 men, an expectation which it might be impossible to realize. As regards the remainder of the scheme, Mr. Stanhope said he must reserve his opinion until he was more fully informed as to the purpose of the proposed mobilization.

The Secretary of State remarked that the proposal to draw on the home establishment for a considerable force in excess of what India could furnish did not appear to him to militate in any material degree against the utility of the scheme, which was confined to the measures needed for placing on the frontier for active service a force properly equipped and organized for any duty which Her Majesty's Government might require it to perform, and that this condition appeared to have been adequately met by the Committee without entailing for immediate requirements a demand for much, if anything, in excess of what the Indian establishment could afford. His Lordship, however, expressed his opinion that it was expedient, in view to giving present effect to the scheme, that its preparation and organization should depend on the materials at hand, leaving all considerations of what might subsequently be required to those Imperial conditions which could not be foretold, and which must be met when they arose by the necessary action of Her Majesty's Government working in the general interests of the Empire.

The Government of India in reply (despatch No. 134, dated 27th July 1888) explained that the scheme for the mobilization of two army corps and a reserve division was intended to be regarded as a plan susceptible of modification in accordance with ever-varying

circumstances, and that the failure to obtain reinforcements from England would either preclude the possibility of sending 75,000 men into the field, as the scheme contemplated, or would necessitate the garrisons left in India being reduced largely below the point of safety.

It was further said that it was difficult to believe that, in a great emergency, even if all the efficient troops in England were otherwise employed, it would not be possible to raise British soldiers of some sort who would answer the purpose of garrisoning India when its own seasoned troops were moved beyond the frontier; and it was suggested that as the army reserve had reached a strength of 50,000 men, and the revenues of India had been charged with the cost of the short service system on condition of a portion of the reserve being available for India, some definite understanding should be come to with the War Office on the subject.

As regards the officers, it was said that although the numbers required were hypothetical, the Government of India could not but think that three or four hundred young men could be got for Indian service whenever the demand should arise.

The Secretary of State was further informed that, in order to meet His Lordship's wishes, an alternative scheme would be formulated on the supposition that no reinforcements could be expected from England, and that a plan was being considered for creating a reserve of officers for commissariat and transport work, composed of gentlemen from private life, the civil departments, police, &c.

With respect to the purpose of the proposed mobilization it was observed that although the two army corps

with a reserve division were intended for a particular object, it was obvious that the whole or a portion of the force could be used for other purposes or in other countries with but slight modification of conditions. The Government of India considered that the test of the efficiency of the military system in India was the ability to place such a force in the field within a few weeks, and at the same time to provide for the maintenance of order within India itself.

It may here be remarked that the Secretary of State has, in furtherance of the scheme, accorded sanction to the following proposals involving increase of expenditure :—

- (i) An increase of the reserve of remounts from 930 to 1,200.
- (ii) The maintenance on a war establishment of the eleven batteries of field artillery of the 1st Army Corps, and an addition of 279 horses to their permanent establishment.
- (iii) The increase of the establishment of transport animals for the 1st Army Corps by 1,000 mules and 2,000 donkeys, at an immediate outlay of Rs. 25,000, to be ultimately met by a reduction in the establishment of elephants.

*Formation of
a railway ser-
vice corps.*

The employment of the railways during mobilization and concentration has naturally been discussed at length by the Mobilization Committee, and its sub-committees; and it is thought that it will be convenient to mention here the organization of a railway service corps which will, when formed, assist very greatly the operations of mobilization.

The formation of a railway service corps for India has been frequently proposed and discussed by the military authorities in this country. Various schemes had been considered, and eventually in 1885 a despatch was sent home, in which it was proposed that all the European staff of the Sind, Punjab and Frontier Railways should be enrolled as volunteers, and that out of these a picked body, 600 or 800 strong, comprising engineers, locomotive and traffic officers, inspectors, clerks, &c., should be entertained for special service beyond the frontier.

This arrangement was approved by the Secretary of State, but some difficulties were experienced in drawing up rules and regulations to give effect to this scheme, and the elaboration of the plan was entrusted to a special committee.

The proposals submitted by this committee differed considerably from those to which Lord Randolph Churchill gave his assent, and the approval of the Secretary of State was accordingly asked to the modified scheme proposed by the special committee, the general features of which are as stated below :—

- (a) It provides for an “ Army Railway Corps ” of 935 of all ranks.
- (b) The corps to be organized into “ construction companies ” and “ working companies,” and armed and equipped as sappers.
- (c) With the exception of the paid staff, the corps to be formed from the employés of the North-Western Railway—
 - (1) by the enlistment of civilian volunteers ;

- (2) by the entertainment of British soldiers, on completion of their color service, in the North-Western Railway service, subject to enlistment in the corps ;
- (3) by the entertainment of sepoy with from five to ten years' army service.
- (d) British and native soldiers to receive their reserve pay in addition to their departmental pay whilst in the corps. With this exception the members of the corps, other than the military staff, to receive, in peace time, no military pay or addition to their regimental allowances.
- (e) On mobilization all ranks to receive an increase of 25 to 50 per cent. of pay, which would be a military charge. The increments to be regulated by the scales of extra allowances which it has been usual to grant to civilians, British and native, employed with an army in the field.
- (f) On mobilization the corps to be under the Army Act, but in peace time military law to be in abeyance, except in so far as it applies to volunteers.
- (g) The military training of the corps to be that prescribed for engineer volunteers.

The sanction of the Secretary of State has not yet been received to the execution of this project.

Allusion has been made on a preceding page to the general summary of the work accomplished by the

Mobilization Committee up to the 1st August 1887. On that summary and the draft of the despatch which was subsequently addressed to the Secretary of State as No. 180 of 1887, His Excellency the Viceroy placed on record a minute expressive of his appreciation of the labors of the Committee, which may appropriately be entered in this place. It was as follows:—

“I cannot allow these papers to go into circulation without expressing my warm admiration of the manner in which the Mobilization Committee has conducted its arduous labors. Although in the despatch which has been drafted in the Military Department its work is alluded to in very modest terms, and is described as the mere initiation of a project, it is probable that no scheme of a similar description has ever been worked out with greater thoroughness, in more detail, or with a clearer apprehension of the ends to be accomplished than that which is now about to be submitted to the Secretary of State. I consider that especial thanks are due to the Commander-in Chief and to those of his Staff who have been associated with him in this business, to General Chesney, to Colonel Collen, who has long made this subject his special study, as well as to the heads of the other departments whose assistance has been invoked, as well as to Major Elles, R.A., the able Secretary to the Committee.

“Another very pleasant feature in the case is the cordiality with which the different authorities have worked together and endeavoured by a united effort to produce a satisfactory result.

“I fully appreciate the consideration upon which so much stress is laid in the despatch, that, in order to render the labors of the Mobilization Committee permanently effectual, it is necessary that some means should be adopted for keeping all the proposed arrangements up to date, and modifying the suggested combination in accordance with the changing circumstances of the period. The result of the Committee’s labors is a magnificent monument of industry and professional ability, and I should be glad if the Military Department would convey to its members this expression of my great satisfaction at what they have accomplished.

5-10-87.

(Sd.) DUFFERIN.

The Secretary of State subsequently expressed his entire concurrence in the Viceroy's minute, and asked that the Committee might be informed of his great satisfaction at the admirable work they had accomplished.

CHAPTER V.

THE MORAL AND MATERIAL IMPROVEMENT OF THE ARMY.

Institutes and Asylums.

For many years the Government have earnestly endeavoured in every way to improve the moral and material welfare of the British soldier in India. In 1864, on the recommendations of a special committee assembled for the purpose of investigating the subject, several measures in connection with the provision of libraries, recreation rooms, workshops, coffee shops, gardens, cricket-grounds, &c., were carried into effect. These measures have from time to time been modified or amplified as experience suggested, but it has always been felt that more still remained to be accomplished to meet the abnormal conditions of a soldier's life in India. Early in 1887, acting on the request of the Commander-in-Chief, Major Robertson, then Assistant-Accountant-General in the Military Department, drew up a valuable note on the subject, in which he recommended the amalgamation of the various regimental institutions and the formation of soldiers' clubs. These proposals were approved by the Government and by the Commander-in-Chief, and under the orders of the latter, a committee was assembled at Rawal Pindi, under the presidency of Major-General Dillon, C.B., C.S.I., with instructions to consider and report upon the subject, bearing in mind that the main object of the Government was the improvement of the social condition of the British soldier in India, and that there were grounds for expecting that this would be accomplished, and intemperance and the crime that follows on it sensibly reduced, by the provision for him, within the precincts of his own lines, of

*Formation of
regimental
institutes
for British
soldiers in
India.*

such reasonable comforts as would induce him to seek for recreation and amusement there rather than abroad.

The committee, having duly deliberated, arrived at the conclusion that the best way of attaining the important object desired was to abolish the old canteen system, and to provide for each corps an institute combining reading, recreation, and refreshment rooms, theatre, skittle alley, quoit ground and shooting gallery; and in view to the formation of such institutes, it recommended—

(a) That the institute (except the theatre) should be regimental, and should be called “The Regimental Institute.”

(b) That it should consist of two establishments :

(1) The canteen, combined with the coffee shop, regimental stores and a supper room, to be called “The Refreshment Department.”

(2) A branch coffee shop, combined with the recreation and reading rooms, library, skittle alley, quoit ground, and shooting gallery, to be called “The Recreation Department.”

The following recommendations were also made by the committee :—

(i) That the institute should be supervised by a committee of officers having entire control over the funds, and assisted by a sub-committee of non-commissioned officers and privates as a consultative body.

(ii) That where a barrack was not available a cheap construction should be added to the existing canteen, for supper room, &c.

- (iii) That the canteen and supper room should be started by Government with furniture, crockery, glass, linen, &c.
- (iv) That a platform, with a piano, should be provided at one end of the supper room.
- (v) That a barrack should be fitted for the recreation department, or a building erected.
- (vi) That the discipline of the institute should be maintained by a committee of selected soldiers.
- (vii) That the theatre should be a *station* institute, under a committee of officers.

These recommendations were generally approved, and in a letter addressed to the Adjutant-General in India, it was said that steps might be taken for the formulation of proposals for the introduction of the scheme throughout India; and a hope was at the same time expressed that in carrying out the measure, the original recommendation of the Commander-in-Chief would be borne in mind; *viz.*, to abolish, or at least to modify the canteen system, and to improve the refreshment department and render it attractive.

A proposal that the branch coffee shop, which was to belong to the recreation department, should be so furnished as to admit of the suppers of temperance men and total abstainers (who would not care to frequent the combined canteen, coffee shop and supper-room) being brought to them from the refreshment department to the coffee shop, was also approved.

It was decided that the canteen should in future be designated the "Refreshment Room."

The Government of India also expressed approval of a proposal made by the committee that in the case of regiments arriving in the country in future, the daily

issue of a dram of raw spirits should not be authorized (except in the field) and that no spirits should be issued in their refreshment bars unless diluted with water or mineral water.

The correspondence was forwarded to the Secretary of State, and his Lordship, in conveying approval of the proposed measure, requested that an estimate of the cost involved might be submitted before any steps were taken for the establishment of the institutes. Estimates have accordingly been called for from the three presidencies, but have not yet been received. The scheme has, however, been started in many stations, at a trifling cost, by the re-arrangement of existing barrack accommodation.

*Proposed
grant of fur-
lough to Bri-
tish non-com-
missioned offi-
cers and men.*

In the year 1837, the Government of India had under consideration the desirability of encouraging a larger proportion of good and reliable warrant officers, non-commissioned officers and men to prolong their service with the colors, and to re-engage for service entitling them to pension, the object being to render the British army in this country more efficient by retaining the services of a certain proportion of acclimatized and well-disciplined old soldiers, whose places would otherwise be taken by a corresponding number of immature youths from England.

With this view, it was suggested to the Secretary of State that, as an experimental measure, the grant of furlough to England for six months should be conceded to a limited number of non-commissioned officers and men of twelve years' service who would re-engage to complete twenty-one years' service, and whose regiments and batteries had at least three years' further Indian service to complete, such grant being admissible only on the recommendations of commanding officers, and restricted in the first year to 300 men.

The Secretary of State in reply, stated that, as it was his intention to reduce in future to the utmost the existence of the spare accommodation available under the present arrangements for the transport of troops between England and India, he considered it highly inexpedient to introduce a system of furlough to from 300 to 1,200 soldiers annually, a concession which could only be continued at a greater expense to the State than he was prepared to sanction, and which might soon have to be withdrawn. And he added that His Royal Highness the Commander-in-Chief was of opinion that, although leave might advantageously be granted to warrant and non-commissioned officers electing to re-engage, he entertained a strong objection to the same privilege being extended to the privates of the army, as it was desired to discourage the latter from re-engaging. The question is, for the present, held in abeyance.

The military asylums established by the late Sir Henry Lawrence have always received the aid and encouragement of the Government of India. During the last few years the question of the admission of the children of volunteers and civilians into these asylums has occupied some attention. In 1885, on the recommendation of the Government of Madras, the Government of India sanctioned the admission of the orphan children of volunteers into the Lawrence Asylum, Ootacamund, on the condition that the children of British soldiers were in no way to suffer supersession or exclusion as a consequence of this concession. The admission of the children of civilians to the benefits of the Murree Asylum was also sanctioned the same year, subject to the condition that soldiers' children should always have a prior right to admission and should in no way be injuriously affected by the change, that the charge

*Admission of
children of
volunteers
and civilians
into Lawrence
Military
Asylums.*

for the maintenance of the children of civilians should be sufficient to cover all expenditure incurred on that account, and that no part of the cost of their education, housing, board, &c., was to be a charge on the trust funds of the original institutions.

The extension of a similar concession in regard to the Lawrence Asylum, Sanawar, particularly with regard to the admission of the children of efficient volunteers, is now under consideration in connection with certain recommendations made by the Finance Committee for the more economical management of the several Lawrence Asylums and Orphanages in India.

Improvements at the Sanawar Military Asylum.

In 1886 and 1887, on the recommendations of General Chesney and Surgeon-General Sir Benjamin Simpson, various useful improvements were introduced at the Sanawar Asylum, such as the development of technical classes, the provision of carbines for drill purposes, the extension of play-grounds, the construction of a gymnasium, the removal of the children to Subathu for the winter months, &c.

Proposed abolition of the Abu Asylum.

A suggestion was made by the Finance Committee to close the Abu Asylum, but the adoption of this proposal has on investigation been found to be unadvisable, and it has, therefore, been abandoned.

Improvement of the position of the native soldier.

Improvement of the position of the native soldier.

The improvement of the position of the native soldier has in many ways occupied the attention of Lord Dufferin's Government, and much has been accomplished in that direction.

In 1885, the Government of India, in their despatch No. 135, containing proposals for the augmentation and re-organization of the native armies in India, included several proposals having this object in view,

and these were concurred in by the Secretary of State in his despatch No. 275, dated the 29th October 1885. The measures sanctioned were briefly these :—

- (i) The grant of a free railway pass to each man going on and returning from furlough ;
- (ii) The grant of the second and third increments of good-conduct pay after six and ten years' service, instead of after nine and fifteen years' service as formerly ;
- (iii) The grant of full-pay to all recruits on enlistment ;
- (iv) An addition of one rupee to the yearly half-mounting allowance of four rupees ;
- (v) A reduction of the period of service with the colors qualifying for pension, *viz.*, from thirty-two to twenty-one years, with the prospective abolition of the existing invalid pension after fifteen years' service.

These advantages were notified in India Army Circulars, 1886, clause 170.

The question of the improvement of the hutting system of the native army has been under consideration for many years. The present system, though in harmony with the ordinary conditions of native life in India, does not fulfil the requirements of modern sanitary science, and in the opinion of both military and medical authorities it is desirable to provide an improved style of accommodation in view to reducing sickness and invaliding.

*Revision of
the hutting
system of the
native army.*

It has lately been decided that the state of the finances will not, at present, admit of any large expenditure being incurred in connection with any radical changes, but certain modifications of the present system are proposed.

In Bengal it is intended to abolish the half-hutting system, and introduce in lieu a monthly repair allowance of Rx. 10 per regiment, with effect from the 1st April 1889.

In Bombay it is proposed to make an annual budget provision of Rx. 5,000 in the Military Department for line building, to be applied at the discretion of the Commander-in-Chief. Under this arrangement it is hoped that the lines in the Bombay Presidency will be entirely reconstructed, on sound hygienic principles, in about eighteen years.

The Madras Government have been asked to submit proposals for reconstructing the lines in that presidency, under some arrangement similar to that sanctioned for the Bombay Presidency, but no reply has yet been received.

The above mentioned changes are now under consideration, and when a decision is arrived at it will be reported for the approval and sanction of the Secretary of State.

*Grant of
meritorious
service medals
and annuities
and gratuities
to the
native army.*

As an appropriate way of marking the Jubilee of Her Majesty the Queen-Empress, a proposal was made to extend to the native army in India the grant of medals for meritorious service and good conduct, accompanied by annuities and gratuities, on a system similar to that obtaining in the British Army.

It was proposed—

I.—That a silver medal, inscribed “For meritorious service,” with an annuity of Rs. 25 for non-commissioned officers only, should be granted to each regiment of cavalry and infantry in the three presidencies. The grants, after they were made in the first instance, to be repeated only on a vacancy occurring.

II.—That two silver medals, inscribed “For long service and good conduct,” with a gratuity of

Rs. 25 each, for rank and file only, be granted annually, irrespective of vacancies, in each of the corps referred to above.

III.—That one silver medal inscribed “For long service and good conduct,” but without gratuity, be granted annually in every corps above referred to, to a soldier about to be transferred to the pension establishment, whose field service and irreproachable conduct throughout his service had been such as to mark him for reward, but whose position on the list of candidates could not procure him the medal and gratuity.

This proposal was approved by the Secretary of State for India in December 1887, and the grant announced to the army in January 1888.

Another proposal to commemorate the Jubilee of Her Majesty was the extension of the Order of British India by the addition of fifty members to the second class of the Order. *Extension of the Order of British India.*

The reason for proposing an increase to the second class only was that senior native officers were already well paid and in possession of many pecuniary advantages, and that the appointment of more native officers to the junior class would secure the actual presence of more members of the Order with regiments.

The augmentation was sanctioned by Her Majesty's Government in May 1887, and announced to the army on the Jubilee day.

On the recommendation of the Commander-in-Chief in India, a proposal was made to the Secretary of State for India by the Government of Lord Dufferin for the grant to all authorized followers accompanying an army in the field of war medals of a cheaper material than that issued to the troops, the grant of medals under existing rules being restricted to certain classes of followers when they had been actually exposed to the *Grant of bronze war medals to authorized followers.*

re of the enemy under circumstances which rendered such exposure a duty.

The reasons urged in favor of this proposal were that a medal was prized not so much for its intrinsic value, as for the fact that it was a recognition from the State that the recipient had done good service, and had shared in the dangers inseparable from war; that the knowledge that a man would receive this decoration would materially help recruiting operations in the event of the Government of India requiring large numbers of men for the transport and other departments, and that its non-receipt under the old rules was viewed as a grievance by many followers attached to regiments and departments, who had shared in the hardships and dangers of recent campaigns, but were held to be not entitled to a medal except under the above conditions and on the production of certificates, which, for various reasons, it was often not possible for them to obtain.

The proposal was accepted by Her Majesty's Government in August 1887, and the issue of bronze medals to all authorised followers who accompanied the army in the field during the late operations in Burma in 1885-86-87 has been authorized.

Training, education, and equipment of the Army.

*Technical
training of
the Bengal
Sappers
and Miners.*

In 1885, the Government of India sanctioned the adoption of a scheme proposed by the commandant of the Bengal Sappers and Miners for the provision of trained men for the various branches of technical work in the corps and for the torpedo service in Calcutta, by retraining a service company permanently at head-quarters to undergo continuous practice and instruction in the various technical duties of the corps, *viz.*, telegraphy, pontooning, printing, photography and lithography, and by providing a detachment at

Calcutta for torpedo service. The scheme involved no extra expenditure.

The introduction of a system of musketry instruction for officers and non-commissioned officers of British regiments and British officers of native regiments being considered advisable, the formation of classes, under the supervision of the army musketry staff, was sanctioned in 1885, as an experimental measure. Four classes were directed to be formed, two in Bengal, and one each in the Madras and Bombay presidencies. The correspondence was forwarded to the Secretary of State, who approved of the measures taken.

Instruction of the British and native armies in musketry.

In October 1887, the Commander-in-Chief reported that this arrangement was not altogether satisfactory, and recommended an increased instructional staff and other changes, with a view to these local schools being placed on a better footing. This extended scheme embraced the instruction of native officers and non-commissioned officers, in connection with the contemplated issue of Martini-Henry rifles to the native army. After prolonged discussion, the scheme was sanctioned with certain modifications, and reported to the Secretary of State.

Great attention has, for some years, been paid in India to the subject of army signalling, but there has been a certain want of uniformity both as regards instruction and equipment, especially with reference to the system in force in England. In order to remedy this, and to assimilate the system throughout the Empire, the following proposals were submitted to Her Majesty's Government in December 1887 :—

Reorganization and improvement of the army signalling instructional staff.

- (1) The abolition of the existing signalling staff,* and the substitution of an Inspector of Army Signalling for India on Rx. 50, staff

* 1 Inspector of Army Signalling in Bengal on Rx 25 staff.

1 Inspector of Army Signalling at Bangalore on Rx 25 staff

1 Inspector of Army Signalling at Poona on Rx 25 staff.

- pay, and one Assistant-Inspector for Madras and Bombay on Rx. 40, staff pay.
- (2) The establishment of two central schools of instruction, one at Kasauli for the Bengal army, and the other at Poona for Madras and Bombay.
 - (3) The introduction of a scale of prizes and badges, similar to that introduced at home and laid down in Art. 950 of the Royal Warrant of 1884, as amended by War Office Circulars, Clause 59 of 1886.
 - (4) Working pay of assistant-instructors at schools and classes.

The annual cost was estimated at Rx. 4,438, or Rx. 833 in excess of the amount incurred under the old system.

In conveying approval to this scheme generally, the Secretary of State sanctioned the appointment of two inspectors of army signalling, one for Bengal and one for Bombay and Madras, each on a staff salary of Rx. 40,—instead of an inspector for India and an assistant-inspector for Bombay and Madras. The adoption of the scheme was notified in India Army Circulars.

*Reductions
in the super-
vising staff
of army
schools.*

The reduction of the cost of army schools has received attention, and some economy has been effected. In February 1887 the Finance Commissioner suggested the reduction of the supervising staff by a sub-inspector in the Bombay Presidency, and by the assistant superintendent and one sub-inspector in the Madras Presidency. The Bombay Government agreed to the proposed reduction of one sub-inspector, which was carried out. As regards Madras, it was decided to defer the abolition of the post of assistant superintendent of army schools, and the absorption of one of the sub-inspectors, until the occurrence of vacancies. The post of assistant

superintendent has since been abolished, on the retirement of the Superintendent of Army Schools, Madras.

Camps of Exercise.

During the Viceroyalty of Lord Dufferin, the subject of the concentration of troops in camps of exercise has received considerable attention; several such assemblages have been organized, by which the training of the army has received practical development. The first of these gatherings occurred in March 1885, when more than 17,000 troops were assembled at Rawal Pindi, though it should be mentioned that the object of this concentration was not so much to train and exercise the troops, as to emphasize the political importance of the interview which then took place between His Excellency the Viceroy and His Highness the Amir of Afghanistan. The following corps were concentrated at Rawal Pindi on this occasion :—

Artillery.

D-A Royal Horse Artillery.
 L-A " " "
 K-B " " "
 J-2nd Royal Artillery.
 R-2nd " "
 L-3rd " "
 N-3rd " "
 9-1st Cinque Ports Division, Royal Artillery.
 1-1st Eastern Division, Royal Artillery
 2-1st Scottish Division, Royal Artillery.
 Two batteries, Punjab Frontier Force

Cavalry.

1st Dragoon Guards.
 6th " "
 9th Lancers.
 3rd Bengal Cavalry.
 14th Bengal Lancers.
 15th Bengal Cavalry.
 18th " "
 19th Bengal Lancers.

Infantry

1st Battalion Royal Irish Regiment.
 2nd " Cheshire "
 1st " West Riding "
 2nd " Manchester "
 2nd " Highland Light Infantry.
 2nd " Seaforth Highlanders.
 1st " Royal Irish Fusiliers
 4th " Rifle Brigade.
 1st Bengal Infantry.
 14th "
 19th "
 21st "
 25th "
 31st "
 1st Gurkha Regiment.
 4th "
 5th "
 Corps of Guides.
 No. 6 Company, Sappers and Miners.

The Rawal Pindi Darbar, assembly of troops.

Camp of Exercise, Delhi.

During the cold season of 1885-86, a considerable concentration of troops took place for purposes of training and exercise: these were organized in two distinct

forces, and manœuvres on an extensive scale were carried out in the country between Delhi and Umballa. The following were the troops assembled on this occasion :—

NORTHERN FORCE.

1ST DIVISION

Cavalry Brigade.

6th Dragoon Guards.

4th Bengal Cavalry.

10th Bengal Lancers.

L-A Royal Horse Artillery.

1st Infantry Brigade.

2nd Battalion Royal Irish Regiment

1st " West Riding Regiment

8th Bengal Infantry.

21st " "

2nd Infantry Brigade.

2nd Battalion Northumberland Fusiliers.

1st " Royal Irish Fusiliers.

4th Gurkha Regiment.

5th " "

Divisional Troops

N-3rd Royal Artillery.

P-3rd " "

L-4th " "

1-1st Eastern Division, Royal Artillery (Mountain Battery)

Cavalry of the Corps of Guides.

9th Bengal Infantry.

Two companies, Sappers and Miners.

2ND DIVISION.

Cavalry Brigade.

1st Dragoon Guards.

15th Bengal Cavalry.

18th " "

N-B, Royal Horse Artillery.

1st Infantry Brigade.

2nd Battalion West Yorkshire Regiment.

2nd " Manchester Regiment.

14th Bengal Infantry (Sikhs).

1st Sikh Infantry.

SOUTHERN FORCE.

1ST DIVISION.

Cavalry Brigade.

8th Hussars.

13th Bengal Lancers.

19th " "

C-A, Royal Horse Artillery.

1st Infantry Brigade.

1st Battalion King's Own Borderers.

4th " Rifle Brigade.

45th Bengal Infantry (Sikhs).

1st Gurkha Regiment.

2nd Infantry Brigade.

1st Battalion Border Regiment.

2nd " Seaforth Highlanders.

5th Bengal Infantry.

24th " "

Divisional Troops.

R-2nd Royal Artillery.

L-3rd " "

D-4th " "

7-1st Northern Division, Royal Artillery (Mountain Battery).

26th Bengal Infantry.

Two companies, Sappers and Miners.

2ND DIVISION.

Cavalry Brigade.

3rd Dragoon Guards.

1st Central India Horse (three troops).

2nd " " (three ").

8th Bengal Cavalry.

F-A, Royal Horse Artillery.

1st Infantry Brigade.

2nd Battalion Highland Light Infantry.

2nd " Scottish Rifles.

1st Bengal Infantry.

27th " "

2nd Infantry Brigade.
 1st Battalion Connaught Rangers.
 2nd " Derbyshire Regiment
 23th Bengal Infantry
 31st " "

Divisional Troops.
 J-2nd Royal Artillery.
 B-4th " "
 E-4th " "
 No. 8 Panjab Mountain Battery.
 3rd Bengal Cavalry.
 2nd Panjab Infantry.
 One company, Sappers and Miners.

2nd Infantry Brigade.
 2nd Battalion Cheshire Regiment.
 1st " East Surrey Regiment.
 22nd Bengal Infantry.
 39th " "

Divisional Troops.
 G-1st Royal Artillery.
 O-3rd " "
 G-1th " "
 9-1st Cinque Ports Division, Royal
 Artillery (Mountain Battery).
 7th Bengal Cavalry
 3rd Bengal Infantry
 One company, Sappers and Miners.

Contingents of the Native States of Kashmir, Patiala, Jhind and Nabha, and a battalion formed of details from various volunteer corps also formed part of this assemblage of troops. Altogether upwards of 35,000 troops took part in these manœuvres, which were attended by several distinguished foreign officers, deputed for the purpose by various continental powers and by the Government of the United States of America.

On the 19th January 1886, after the termination of the manœuvres, the troops of the two forces passed in review before His Excellency the Viceroy at Delhi, though under trying circumstances in consequence of the inclemency of the weather. On this occasion His Excellency expressed himself to the following effect:—

"GENERAL ROBERTS,—I beg to offer you my heartiest congratulations on the noble and imposing spectacle which has been presented to us this morning, and which has proved a fitting termination to the series of useful and interesting manœuvres which Her Majesty's Army has recently executed. I must request you to convey to the Generals commanding army corps, divisions, and brigades, and to the officers and men of all arms under your command, my great satisfaction at their fine appearance and bearing, as well as at the admirable manner in which they marched past under very trying circumstances. I believe that the army in the field to-day is the largest which has ever been brought together in India, and I congratulate you most heartily on finding yourself at

the head of such gallant troops. It gives me particular pleasure to see the fine soldiers of the Native States brigaded with the troops of Her Majesty's Army, and to hear from you of their excellent bearing during the manœuvres. It will be my duty to acquaint the Queen-Empress with the circumstances attending this day's performance, and I am sure that Her Majesty cannot fail to derive the very greatest pleasure from the excellent account I shall be able to give her of her army in India, and of the individual regiments, whether British or native, whom I have had the privilege of inspecting."

Camps of Exercise at Meerut and other stations.

The concentration of troops at Meerut, Umballa and Rawal Pindi, with an artillery camp at Campbellpore, was sanctioned for the cold season of 1886-87, and a sum of Rs. 2,500 allotted for the purpose. The following were the troops assembled :

Meerut Division.

F-A, Royal Horse Artillery.	2 companies, 2nd Battalion,
L-A, " "	Lincolnshire Regiment.
L-3rd Royal Artillery.	6 companies, 1st Battalion
B-4th " "	King's Own Borderers.
3rd Dragoon Guards.	4th Battalion Rifle Brigade.
8th Hussars.	4 companies, 22nd Bengal In-
19th Bengal Lancers.	fantry.

Sirhind Division.

G-A, Royal Horse Artillery.	2nd Battalion Cheshire Regi-
N-B, " "	ment.
R-2nd Royal Artillery.	2nd Battalion Highland Light
2nd Dragoon Guards.	Infantry.
9th Bengal Lancers.	6 companies, Connaught Ran-
16th Bengal Cavalry.	gers.
2nd Battalion Royal Irish	23rd Bengal Infantry
Regiment.	(Pioneers.)

Rawal Pindi Division.

K-B, Royal Horse Artillery.	15th Bengal Cavalry.
J-2nd Royal Artillery.	18th " "
N-3rd " "	1st Battalion Suffolk Regi-
2-1st Cinque Ports Division,	ment.
Royal Artillery.	1st Battalion West Riding
1-1st Northern Division,	Regiment.
Royal Artillery.	2nd Battalion Royal Sussex
1-1st Eastern Division, Royal	Regiment.
Artillery.	14th Bengal Infantry (Sikhs).
1st Dragoon Guards.	45th Bengal Infantry (Sikhs).

2nd Sikh Infantry.

During the cold season of 1887-88 the troops named below were assembled at camps of exercise held in the Oudh, Lahore, Meerut and Sirhind Divisions, at an artillery camp at Kushiari, in the vicinity of Lucknow, and at a cavalry camp at Lawrencepore. An allotment of Rx. 2,500 was sanctioned for these camps :—

Lawrencepore Cavalry Camp of Instruction.

K-B, Royal Horse Artillery.	14th Bengal Cavalry.
N-B, Royal Horse Artillery.	15th " "
1st Dragoon Guards.	16th " "
5th Bengal Cavalry (three	17th " "
squadrons).	18th Bengal Lancers.
12th Bengal Cavalry.	Cavalry of the Corps of Guides.

Artillery Camp at Kushiari.

E-A, Royal Horse Artillery.	G-1st Royal Artillery.
A-1st Royal Artillery.	O-3rd " "
	L-4th Royal Artillery.

Oudh Division.

17th Lancers.	1st Battalion Royal Welsh Fu-
4th Bengal Cavalry (five	siliers.
troops).	4th Battalion Rifle Brigade.
8th Bengal Cavalry.	1st Bengal Infantry depôt.
2nd Battalion Leicestershire	12th Bengal Infantry depôt.
Regt.	

Lahore Division.

K-3rd Royal Artillery.	1st Battalion West Riding
O-4th Royal Artillery.	Regt.
5th Bengal Cavalry (one	19th Bengal Infantry.
squadron).	32nd and 34th Bengal Infantry
	(Pioneers)

Meerut Division.

F-A, Royal Horse Artillery.	1st Bn. King's Own Scottish
L-A, " " "	Borderers.
K-4th Royal Artillery.	26th Bengal Infantry.
5th Hussars.	1st Battalion 2nd Gûrkhas
19th Bengal Lancers.	One company, Sappers and
2nd Battalion Lincolnshire	Miners.
Regiment.	

Surhind Division.

G-A, Royal Horse Artillery.	4th Battalion King's Royal
2-1st London Dn., Royal Ar-	Rifle Corps.
tillery.	2nd Battalion Wiltshire Regi-
9-1st Cinque Ports Dn., Royal	ment.
Artillery.	23rd Bengal Infantry
2nd Dragoon Guards.	(Pioneers.)
9th Bengal Lancers.	28th Bengal Infantry.
2nd Battalion Royal Scots	
Fusiliers.	

In 1886 a sum of Rx. 500 for the formation of annual camps of exercise in the Madras Presidency was sanctioned; and authority has been given for the provision of Rx. 1,000 in the Bombay budget of 1887-88 for the same purpose.

Issue of the new magazine rifle to British troops and of Martini-Henry rifles to the native army.

The necessity of placing in the hands of the soldier the most efficient weapon procurable has not escaped the attention of Lord Dufferin's Government, and with this object steps have been taken to fully test the new magazine rifle in India, in view to re-arming the British

troops in the country with it should it be approved of. A hundred of these rifles are now under trial.

The arming of the native troops of the 1st and 2nd Army Corps with the Martini-Henry rifle is nearly complete. Provision has also been made for the re-arming, during 1888-89, of a large portion of the native army in India with this weapon.

Reference having been made on a former page to certain advantages conceded to the army in commemoration of Her Majesty's Jubilee, it may in this place be stated that the following measures were adopted in India in order to celebrate the occasion in a suitable manner:—

Measures for the celebration of the Queen's Jubilee by the army in India.

I.—A general review of the troops at all stations was held on the 16th February 1887, the day fixed for the celebration throughout India of Her Majesty's Jubilee; and an Imperial salute of 101 guns was fired at all the appointed military stations.

II.—A money grant was awarded on the same date to all British and native corps, to be expended, under regimental arrangements in celebrating the day, *i.e.*, in sports and extra rations for British troops, and in sports and native entertainments for native troops, as might be thought suitable.

The 21st of June 1887 was also observed as a holiday by the army in India on account of the Jubilee anniversary, a salute of fifty guns being fired at day-break at all the appointed military stations.

An amnesty was granted to deserters and other classes of military offenders in the British army. In the native army all soldiers undergoing sentence of courts-martial in military custody were released with

remission of their unexpired terms of imprisonment; and regimental prisoners and defaulters were pardoned.

It may here be mentioned also that a deputation of thirteen representative native officers of Indian cavalry, under the command of Captain Muir, was sent to England to take part in the Jubilee procession there. Much satisfaction was expressed by His Royal Highness the Prince of Wales and by the Secretary of State with the manner in which all members of this party conducted the responsible duties entrusted to them. By the express desire of Her Majesty the Queen-Empress, Captain Muir, and three of the native officers who were already members of the First Class of the Order of British India, were made Companions of the Order of the Indian Empire, while the remaining native officers were either admitted to, or advanced in, the Order of British India.

CHAPTER VI.

THE ARMY DEPARTMENTS.

Judge Advocate General's Department.

As far back as 1879, the Army Organization Commission proposed very considerable reductions in the Judge Advocate General's Department; something was accomplished in this direction, but more recently the investigations of the Finance Committee supported the view that radical changes in the constitution of the department were advisable. The question of re-organizing the department was therefore taken up, and after due consideration had been accorded to the reasons urged by the Commander-in-Chief and the Judge Advocate General against the measure, it was decided to reduce the establishment of officers from fourteen to ten. This step will effect a saving to the State on the staff salaries of these officers of Rx. 6,840 per annum, and when the displaced officers have been absorbed, the saving will be increased to Rx. 10,000 per annum. The officers of the department in the three presidencies have been brought on one list, and the department has been organized as one for the whole of India.

Re-organization of the Judge Advocate General's Department.

Ordnance Department.

In January 1887, the sanction of the Secretary of State was asked to the introduction of certain changes in the mode of appointment of officers to the Ordnance Department. The objects that these changes were intended to secure were the following:—

Changes in mode of appointment of officers to the Ordnance Department.

- (a) The retention of specially qualified factory superintendents or administrative officers beyond the authorized period of ten years.

- (b) That officers so retained should remain permanently in the department under conditions for continuous Indian service similar to those sanctioned for officers of the Royal Engineers.
- (c) That factory officers, after five years' training as such, should be permitted to proceed to England to further qualify in improvements and changes in war matériel.

The Secretary of State sanctioned the last-mentioned proposal, and also agreed to the retention of certain administrative officers for more than ten years; but beyond this he did not, as then advised, deem it necessary to go. The subject is under consideration by the Government of India.

*Abolition of
the Madras
gun-powder
factory.*

As it was considered that the requisite supplies of gunpowder for all India could be sufficiently met by two factories (those of Bengal and Bombay), orders were issued in 1887 to close the factory at Madras, retaining only an establishment for the care of the machinery, and distributing the surplus staff throughout the Ordnance Department in India. This led to an estimated annual saving of Rx. 6,000.

*Armaments
for coast
and frontier
defences.*

Requisitions have from time to time been submitted to the Secretary of State for the armaments required for the coast defences of Karachi, Bombay, Hughli and Rangoon, Aden being provided for in conjunction with the War Office authorities. Some six-inch guns have been received, and as the ten-inch gun has passed the experimental stage, it is hoped that the armaments of the coast defences will ere long be complete. Meanwhile, the present armaments, consisting chiefly of 38-ton and nine-inch guns, will be maintained.

Provisional armaments for the North-Western Frontier defences have been allotted, and are now being moved into position. A requisition for the guns to be

eventually mounted on these defences will in due course be submitted.

In Despatch No. 7, dated the 10th January 1888, the probable future requirements of the horse, field, heavy field and mountain artillery in India were fully dealt with, as regards new designs of guns; and in despatches Nos. 4 and 105 of 1888, the necessity for experimenting with a ten-pounder breech-loading gun for horse-artillery for this country was strongly urged. In the meantime the field artillery are gradually being re-armed with the twelve-pounder breech-loading gun; 72 of these have arrived in the country, from which three complete batteries have already been issued, while the whole of the eleven batteries of the 1st Army Corps will, it is hoped, be completed during the year. Guns and carriages for the re-armament of sixteen more batteries of field artillery may possibly be received during 1889-90.

Artillery requirements.

All the European batteries, two native batteries of the Punjab Frontier Force, and one Bombay native battery are now armed with the 2·5" rifled muzzle-loading seven-pounder gun. The remainder have still in possession the seven-pounder rifled muzzle-loading gun of 200 lbs. Experiments have been instituted in conjunction with the home authorities in view of ascertaining whether a ten-pounder breech-loading jointed gun and a breech-loading jointed howitzer could not be constructed suitable for mule pack transport.

Equipment of mountain batteries with 2·5" guns.

Arms and equipments have been furnished to the military police in Burma from the reserves of the Ordnance Department to the extent of about 28,000 sets.

Arms and equipment furnished to the military police in Burma.

Commissariat Department.

The amalgamation of the supply and transport branches of the Commissariat Department, and the appointment of a Commissary-General-in-Chief have

Reorganization of the Commissariat Department.

been sanctioned by the Secretary of State and carried into effect. The Commissaries-General in circles in Bengal are now responsible to the Commissary-General-in-Chief, and those in Madras and Bombay to the Governments of those presidencies respectively, for the combined supply and transport within their administrations. A Commissary-General for Transport, as adviser in that branch to the Commissary-General-in-Chief, has also been appointed.

All appointments are now made to the amalgamated Department of Supply and Transport in the three presidencies, by the Government of India, and the Governments of Madras and Bombay, respectively.

The re-organization of the department brought with it the following changes :

- (a) Chief commissariat officers were placed in charge of ranges corresponding with military commands ;
- (b) The association of generals commanding divisions and districts with the control of the commissariat of the command, the commissariat officer being on the staff of the general ;
- (c) Decentralization of work arising out of the powers extended to generals ;
- (d) The expansion of the central account office system by the introduction of an account office for each commissariat command.

The following measures have also been carried out :

*Commissariat
field service
manual.*

1. The preparation of a commissariat field manual, which may be said to be the outcome of the consideration of questions relating to mobilization as affecting the operations of the Commissariat Department.

*Reduction of
const. com-
mittees.*

2. The reduction, amounting almost to abolition, of committees, leading to great simplification of procedure.

3. The encouragement of local enterprize under which—

- (a) Flour will be supplied by private mills, and Government mills closed ;
- (b) Woollen socks and Cardigan jackets will be procured from local mills ;
- (c) Carbolic powder of local manufacture will be purchased ;
- (d) Hops grown in Cashmere will be substituted for imported hops.

Procurement locally of certain commissariat stores.

Contracts have been entered into for country-brewed malt liquor for ten years from January 1888, by which a saving estimated at Rx. 600,000 will be effected, comparing its cost with that of English malt liquor, and a saving of Rx. 140,000 comparing it with the cost incurred under the rates of expired contracts.

Supply of country-brewed malt liquor.

An agreement has been entered into with Goode's Compressed Forage Company for the compression of forage (a mixture of hay or *bhusa** and grain) for army horses and transport animals. The company have established a factory at Amritsar, and undertake to compress 2,400 eighty-pound bales of forage per week.

Compressed forage

A very large despatch of transport to Suakin was carried out in February 1885. Large commissariat establishments were furnished for Burma during 1885-86; also transport to some extent.

Supply of transport for Suakin, and commissariat establishments for Burma.

A scheme for the redistribution of the transport in India was sanctioned by the Government of India in the autumn of 1888. The main features of the scheme are the supply of transport partially to the regiments and batteries which are detailed for mobilization, besides supplying a larger amount of transport to forces in special positions, as on the frontier. The question of wheeled transport is

Redistribution of transport.

* *Bhusa*,—Bran, husk, chaff.

also receiving consideration, as the Government of India are of opinion that a large portion of the transport establishment should, in peace time, consist of carts, which might be made available for lines of communication, and for other services, in time of war. Various schemes are also in progress for the utilization of transport in civil and other departments, so as to reduce the cost to the State.

Orders have been given for the purchase of Persian mules, a grant of one lakh of rupees having been sanctioned for this purpose, so as to initiate the trade in mules with Persia.

Establishment of grass farms, and supply of fodder.

With a view to put an end to the old custom of taking grass for Government animals off the land, irrespective of the vested rights of the occupiers, grass farms have been established at Allahabad, Rawal Pindi and Cawnpore, which, combined, pay their working expenses and show a fair surplus. The cultivation of grass is being encouraged among natives, and committees in each station where British troops are quartered have considered the best and most economical methods of fully utilizing the cantonment lands for purposes of fodder supply.

The recommendations of these committees have been received and provisionally sanctioned; and it is hoped that when the scheme is fairly under weigh a reduction of the cost of compensation for forage, now a very heavy item, will be effected.

Medical Department.

Increase of medical officers.

In 1886 the number of medical staff officers was augmented by 22, to provide for the increased number of British troops in India.

Proposed abolition of the Netley course.

In 1887 it was pointed out to the Secretary of State that as the advantages derived from putting the young officers of the Indian Medical Service through the Netley

course were not commensurate with the loss of time and money attendant thereon, the practice should be discontinued, and the officers sent direct to India. Remonstrances against this proposal were made by the Council of Netley, and were forwarded to India for consideration. The Government of India, however, having again carefully considered the subject, saw no sufficient reason to alter the opinion they had already expressed, and the Secretary of State was so informed in despatch No. 132, dated the 27th July 1888.

A scheme for the reduction of the number of medical administrative appointments in India, following the re-organization of the commands and staff, is now under consideration. It is proposed to appoint a deputy surgeon-general to each first-class district, and a brigade-surgeon to each second-class district, the latter being taken from the existing establishment of brigade-surgeons in India. This measure, if adopted, would give an establishment of ten deputy surgeons-general (as against 22, the present number) and nineteen brigade-surgeons, and would, it is estimated, effect an annual saving of Rx. 23,400.

The necessity of forming a reserve of executive medical officers has also come under consideration. It has been ascertained that if need arose, about 40 per cent. of the medical officers in civil employ could be made available for the temporary increase of the military establishment, but as, in the event of a great war, more medical officers would undoubtedly be required, it has been proposed, in the Military Department, to form a reserve in the following ways :—

1. By requiring that every medical officer in the Indian service retiring on pension shall, up to an age to be fixed, be liable to recall to active duty in case of serious war.

2. By offering a premium to young men who have passed good examinations in the various medical colleges and hospitals in the United Kingdom, to become members of a "reserve establishment of medical officers," for service in India on occasions of great emergency.

*Improvement
of the posi-
tion of hos-
pital assis-
tants.*

In June 1885, a scheme for the improvement of the prospects of the hospital-assistant class of the subordinate medical department received the sanction of the Secretary of State. The main features of this scheme are—

- (1) The introduction of the grade of "senior hospital-assistant," carrying with it a monthly salary of Rs. 80 or Rs. 55, according as the individual promoted to the grade has or has not a knowledge of the English language.
- (2) Promotion from one grade to another after five instead of after seven years' service.
- (3) Abolition of the grade of "passed medical pupil," and the introduction of that of "subordinate hospital-assistant" in its place.
- (4) Service for pension to reckon from date of leaving college.
- (5) The grant of kit money of Rs. 30, with Rs. 4 annually, to subordinate hospital-assistants on leaving school.
- (6) Compulsory retirement at the age of 55 years.

*Employment
of nursing sis-
ters in mili-
tary hospitals
in India.*

In furtherance of a suggestion made by Lady Roberts for the employment of skilled women nurses in military hospitals in India, provision has been made for two lady superintendents and twelve nursing sisters, who are now working in the country, and are distributed as follows :—

One lady superintendent and seven sisters at Rawal Pindi.

One lady superintendent and five sisters at Bangalore.

A portion of the Rawal Pindi establishment are at present employed at Murree and in the Gullies, and during the winter months these nurses will do duty in the plain stations of the Rawal Pindi and Peshawar districts. The results of the experiment have been most satisfactory, the employment of these ladies proving in every way a boon to the sick soldier in India. The Commander-in-Chief in India has proposed a further extension of the system, and this is now under consideration.

With the view of providing a trained establishment of ward servants for employment as nursing orderlies in the hospitals of native troops and followers, and of providing a reserve of such men for war purposes, sanction has been accorded to the enlistment of two ward servants per regiment of native cavalry, as dismounted sowars, and per battalion of native infantry, as sepoy, to be included in the fixed establishments of corps.

The medical arrangements for troops in the field have been much modified and improved. For the 1st Army Corps fourteen field hospitals are ready for immediate service, and eight are in readiness for the lines of communication.

Two general hospitals, each consisting of 500 beds for British and the same for native troops, have been sanctioned for the 1st Army Corps. An advanced dépôt of medical stores for supplying the wants of corps units and field hospitals in the front has also been authorized.

Owing to the difficulty of obtaining trained and efficient bearers, and with the view of reducing the number of followers with an army on service, the bearer carriage has been reduced to one per cent. on the strength of the troops. The remainder of the authorized allowance of four per cent. is to be made up by wheeled and animal carriage.

A new field service hospital tent, which will add much to the comfort of the sick, has been approved.

A *tonga** ambulance capable of following troops over rough ground, and made to accommodate four men sitting, or two lying down, and a much improved *dandi*,† the invention of Deputy Surgeon-General W. Collis, Medical Staff, have also been sanctioned.

With the object of aiding the wounded in action, the Government of India have sanctioned the provisions of section XIV, paragraphs 80-90, of the Queen's Regulations and Orders for the Army, being made applicable to India, in view to all officers of the Indian Medical Service, medical subordinates of both classes, permanent establishments of *doolie*‡ bearers, and two men per troop or company of regiments and batteries of artillery, being instructed in stretcher-bearer drill.

*Introduction
of new Medi-
cal. Regula-
tions*

In the latter part of the year 1883, the new Medical Regulations (Army Regulations, India, Vol. VI), embodying the codes formerly sanctioned for the three presidencies, were introduced, by means of which uniformity has been ensured, and much labor and correspondence saved.

Sanitary.

*Re-opening
of lock hospi-
tals; revision
of can-
tonment rules.*

In 1885, as it appeared doubtful whether lock hospitals were producing results proportionate to the care and expenditure bestowed upon them, the experimental closing of ten of them throughout India was authorized. In 1887 they were all re-opened.

In compliance with instructions from the Secretary of State, the "Indian Contagious Diseases Act" and Acts and portions of Acts connected therewith have been repealed, and the residence of prostitutes within

* *Tonga*,—properly *tānga*—a two-wheeled spring cart.

† *Dandi*,—a light covered stretcher.

‡ *Dūli*—(commonly *doolie*; properly *doli*),—a sort of litter.

regimental limits, or their accompanying troops to camps or on the line of march, has been forbidden; while, pending the passing of the revised cantonment rules framed under the new cantonment bill, all compulsory examination of women and granting of licenses to them have been put a stop to; and the hospitals in which prostitutes are treated will be worked as voluntary institutions.

The sanitary improvements carried out during the period from 1885 to 1888 have been directed to the general object of bringing the cantonments into a proper sanitary condition. The following are of considerable importance:—

Sanitary improvements affecting the army in India during the years 1885-88.

- (a) Extensive water-works have been executed at Jabalpur, and are in progress at Chakrata; and complete schemes for bringing a pure water-supply into the cantonments of Quetta and Rawal Pindi have been planned.
- (b) In accordance with the design of quartering a larger proportion of the European troops in hill stations, a new cantonment has been laid out at Cherat, affording accommodation for a battalion of British infantry; and complete barracks for a mountain battery have been constructed at Darjiling.
- (c) A large amount of work has also been executed at Quetta and the out-posts on the Baluchistan frontier, in providing improved accommodation for the different garrisons, in making roads, and draining cantonments.
- (d) New barracks have been built at Faizabad, Jhansi and Nowgong, and station hospitals for British troops at Rawal Pindi, Agra and Morar.
- (e) The number of British troops quartered in the hills has been greatly increased, the annual

average strength at the hill stations of Bengal, not including convalescent depôts, being as follows :—

1884	=	3,889
1885	=	4,000
1886	=	5,455
1887	=	5,960

*Health of the
European
troops, 1885
to 1888.*

The most important increase in the strength of garrisons has occurred at the stations of Ranikhet, Chakrata and Cherat, and in the Murree hills.

The health of the European troops as a whole for the period 1885 to 1887 is shown in the following table, compared with previous years since 1878 and the ten-year period 1870 to 1879.

Abstract of statistics of European troops in India for the last ten years, 1878 to 1887, and for the ten-year period 1870-79.

Year.	Strength.	RATIO PER MILE OF STRENGTH.				Total loss.
		Admis- sions.	Daily sick.	Deaths.	Invali- ding.	
1870-79	57,416	1,475	60	19 34	43	62
1878	56,475	1,651	68	21.46	45	66
1879*	49,582	1,977	78	24.28	49†	73†
1880*	51,796	1,789	74	24.85	46†	51†
1881†	58,728	1,605	70	16 86	38	55
1882	57,269	1,445	65	12 07	33‡	45
1883	55,525	1,336	63	10.88	33	44
1884	54,996	1,513	67	12.56	32	44
1885§	56,967	1,533	71	14.55	23	37
1886§	61,015	1,514	75	15.18	21	36
1887§	63,515	1,370	70	14.20	23	37

* Excluding troops serving in Afghanistan.

† Including troops in Afghanistan.

‡ Calculated on the strength obtained from annual returns.

§ Excluding troops on active service in Burma.

In 1885 the health of European troops was rather unfavorable, the ratios of admissions, daily sick, and deaths being all higher than in any year since 1881. The death rate was, however, lower than that of the ten-year period 1870 to 1879, and the total loss to the army by deaths and invaliding combined unusually low.

In 1886 the admissions were fewer but the mortality somewhat greater than in the previous year, owing chiefly to the serious nature of the diseases contracted by men in Upper Burma.

In 1887 the health of European troops improved generally, the rates of admission, daily sick, and deaths being all lower than in the previous years, the total loss to the army continuing at the low figure of 37 per thousand. The figures for 1888 are not yet available.

The health of the native army as a whole during the period 1885 to 1887 is shown in the following table:

*Health of the
native troops,
1885 to 1888.*

NATIVE ARMY OF INDIA.

Sickness and mortality during the years 1877 to 1887 compared.

Year.	Average strength	RATIO PER 1,000.					Mortality, including absent deaths.
		Admissions into Hospital.	Daily sick.	Deaths from			
				Cholera.	All causes.		
1870-79	..	118,669	1,422	48	1.94	24.90	27.40
1877	...	113,966	1,030	32	1.53	10.90	13.38
1878	...	117,273	1,460	43	2.06	18.04	21.02
1879	..	121,107	1,735	58	4.61	35.15	37.79
1880	...	126,385	1,545	56	0.53	39.22	41.12
1881	...	114,612	1,305	46	0.97	19.24	22.62
1882	...	114,894	1,129	37	1.02	12.24	14.76
1883	...	114,830	923	31	1.15	11.76	14.31
1884	...	114,827	1,042	33	0.71	10.50	12.22
1885	...	115,486	978	32	1.61	13.67	16.09
1886	...	106,010	973	31	1.27	13.27	19.46
1887	...	105,254	1,015	33	1.31	11.68	18.17

* Excluding men on active service in Burma.

It will be seen that the mortality among native soldiers during this period has been somewhat higher than in some of the years immediately preceding, but that as regards the general health of the native troops the years in question compare favorably with most of the previous years, and especially with the ten-year period 1870-1879.

Remount Department.

*Deputation
of the Direct-
or to Aus-
tralia.*

The deputation of the Director of the Army Remount Department to Australia in 1884, to report on the colonial horse market, has been productive of good results. Increased numbers of horses have since been obtained, while a steady improvement has been observable in the class of horse imported.

*Deputation
to Persia.*

Considerable advantage was also derived from his deputation to Persia in 1886, to report on the horse market in that country. He purchased 240 horses and 211 mules, and reported that there were large numbers of horses fit for the native cavalry procurable, but comparatively few fit for the British mounted branches. More could, however, be obtained for the latter corps if time were allowed, six months, at least, having been found to be necessary for this purpose. His visit, however, tended to open up the Persian horse market, and importations have since increased.

*Cape horses
for army pur-
poses.*

The Cape Government having expressed a desire to revive the horse trade with India, arrangements were made to import a trial shipment from that colony. The result is as yet limited to a few horses purchased, but these have given satisfaction, and increased importations are expected during the present (1888-89) season.

*Rearing of
young coun-
try-bred
horses.*

The system of rearing young country-bred horses at Government depôts having proved successful, both in the stamp of horse produced, and in the financial

results obtained, arrangements have been made to increase considerably the annual purchases of this class.

This will result in the imported (Australian and Cape) horses being almost entirely dispensed with eventually, at a great saving to the State, and it will also admit of increased encouragement being given to the horse-breeding operations of this country.

The purchase regimentally of native cavalry re-
 mounts having been proved to result in undue compe-
 tition, and a tendency to raise prices, committees of three
 officers were appointed to purchase in the Punjab and
 North-West Provinces. Under this system the required
 numbers of remounts were obtained, and at cheaper
 rates than they could have been otherwise secured. The
 committees, however, were only at work during the cold
 season, and many districts, to which they might have
 been deputed with good results, remained untouched.
 Remount Agents for the Panjab and North-West
 Provinces have therefore been appointed experimental-
 ly, who, being attached to the Remount Department,
 will work in combination with it, and it is considered
 likely that this will lead to the purchase, at a decreased
 cost, of a larger number of horses of a better class than
 has hitherto been obtainable.

*Purchase of
horses or
the native
cavalry.*

Calculations made by the Mobilization Committee
 having proved that the reserve of 930 horses was in-
 adequate for the requirements of the army, this has,
 with the sanction of the Secretary of State, been increas-
 ed to 1,200 horses, which will in future be kept up,
 distributed between Saharanpur in Bengal and Hosur
 in Madras. Arrangements are also being made, in con-
 nection with mobilization, to supply the artillery of the
 1st Army Corps with sufficient horses from the batteries
 not to be mobilized to enable them, when mobilization
 is ordered, to take the field at once.

*Reserve of
horses for
the Indian
army.*

General observations on horse-breeding operations in India.

Horse-breeding in India is yearly becoming more extensively followed as an agricultural industry. The native farmers appreciate the worth of the valuable sires provided by Government, and are anxious to have their mares branded, so as to have them registered and franked as eligible for mating with the Government stallions.

The sanctioned number of horse stallions in Northern India, including the North-Western Provinces, Rajputana and Bengal, is now 300, and there are at present 117 Government stallions in the Bombay Presidency.

The numbers of branded mares are as follows:—

Bengal Presidency	...	...	16,737
Bombay Presidency	...	...	8,464
Total			25,201

The improvement in the stamp of horses available in the horse marts of Northern India, during the last eight or nine years, is generally acknowledged, and is admitted to be due to the system laid down by the Government of India in 1876, when the present horse-breeding department was established.

The native cavalry in Bengal and the Panjab are chiefly mounted on horses bred locally in Northern India, and they are considered to be better mounted now than in former times.

Some country-bred remounts have been issued to the artillery and British cavalry, and have proved satisfactory. Steps are therefore being taken to purchase more largely in this direction, the horse market being now able to bear it.

The horse shows in Northern India, inaugurated by the Government of India, at which annually Rs. 2,000 are given away in prizes to the best stock, have

proved most successful in inducing better care and management of brood and young stock. It is satisfactory to find that at many of the shows additional money for prizes is locally collected to add to the amount of awards, and it is found that in most horse-breeding districts the yearly horse show is looked upon as the annual holiday gathering, as well as the local mart for selling and buying horse stock.

The amalgamation of the horse-breeding and remount departments, or the transfer of the former to the Revenue and Agricultural Department, and the Secretary of State's despatch urging the formation of a civil veterinary department, have been during the past two years under the consideration of the Government of India.

A proposal made by the Revenue and Agricultural Department in 1885 to take over the horse-breeding department, with its officers, to form the nucleus of a civil veterinary department for the improvement of cattle-breeding and the suppression of cattle plagues, was not received with favor by the Military Department. Last year, however, the subject of transfer was re-opened, and a despatch having been received from the Secretary of State, suggesting the placing of all the Government stud horses under the charge of civil officers, which was more or less in accord with the proposals pending between the Military and Revenue and Agricultural Departments, it was decided that a conference should be held at the end of March and beginning of April, 1888, to consider the question.

The several local governments and administrations interested in the horse-breeding department deputed officers to attend the conference, and representatives from the Military, Intelligence, Remount and Horse-Breeding Departments were also present.

The conclusions arrived at by the conference are now under consideration, and it is hoped, with the co-operation of civil officers, to develop stock breeding on a scientific basis, and at the same time to render professional aid in the prevention and suppression of cattle disease. It is also proposed to form the basis of a civil veterinary department by the transfer of certain veterinary officers from the military to the civil administration.

Horse-breeding in Baluchistan.

In 1885, the Agent to the Governor-General in Baluchistan brought to the notice of the Government of India the excellent field for horse and mule breeding existing in that province; he forwarded reports on the subject, and notice of a horse fair held at Sibi on 12th January 1885, at which fine brood stock were shown. The desirability of providing good stallions for these districts was apparent, inasmuch as no *colt* produce are ever kept by the Baluch horse breeders, and the few malformed horses now provided by local stallion keepers for stud work are of a very inferior stamp, and being more or less affected with hereditary diseases, mar all chance of the breed of Baluch horses being duly maintained. A very small number of stallions have as yet been available for distribution in this district, owing to the necessity for strict economy, but the expediency of supporting horse-breeding in Baluchistan has been borne in mind.

Mule-breeding in India.

Mule-breeding has much developed during the last five years in Northern India, more especially in the Panjab. As the mule is so valuable and indeed so necessary an animal for mountain artillery and army transport work, the fostering of mule-breeding as an agricultural industry has been liberally supported. Since 1880-81, 230 donkey stallions of superior quality and of Italian, French, Spanish and Cyprian breeds have been supplied by the Home Government for distribution in the

mule-breeding districts, and some of Asiatic breed have been purchased lately for the same purpose.

The results have been satisfactory, inasmuch as improved classes of mules are obtainable for different army purposes, and the supplying of superior donkey sires has produced a development of the industry. The demand for the services of the Government donkey stallions is steadily increasing, and the present sanctioned number, 300, cannot be said to fully meet it. This subject has been under the consideration of the Government of India, and the General Superintendent of the Horse and Mule Breeding Departments has urged, in the annual administration reports of the departments, the policy of extending mule-breeding operations in new districts where the mule is at present unknown, so that its worth may become recognised for ordinary pack work ; thus the area of the industry will be increased, and a larger field secured for army purchasing agents when mules may be required for war purposes.

It may be expected that if measures be adopted and carefully conducted on these lines, the Government of India may secure a home (Indian) supply of mules equal to army requirements, and thus the money expended in purchasing will remain in India, and not be sent to foreign countries for imported animals.

The high prices, from Rs. 100 to Rs. 500, realized by good mules, prove the worth of the stock, and will encourage breeders to follow the industry.

Veterinary Department.

In 1885 orders were issued for the introduction into the veterinary department of India of the station hospital system, with a view of economizing establishments.

Introduction of the station veterinary hospital system.

This has been found to work satisfactorily and efficiently, and has resulted in a reduction of the veterinary-staff from 67 to 56 officers, for all purposes, military and civil.

Veterinary-Surgeons are being employed in the general superintendence of the veterinary care of the horses of the native silladar cavalry, and to train and educate a body of native *salutris** for work throughout the country, whose services will, it is thought, prove most beneficial in civil as well as in military employment.

*Question of
the formation
of a civil veterinary
dept.*

The formation of a civil veterinary department for the efficient care of animals under the various local administrations and governments, for service during epidemics and for imparting instruction generally in veterinary matters, has constantly been under consideration, and proposals have been made embodying the views of the Government of India on the subject.†

*The veterinary
colleges
at Bombay
and Lahore.*

In 1884, on his arrival in India, Lord Dufferin had the pleasing duty of declaring the "Bai Sakarbai Dinshaw Petit Veterinary Hospital" at Parel, near Bombay, founded by Sir Dinshaw Manekji Petit, open for the admission of sick and lame animals. To this institution is now added the Bombay Veterinary College, established in 1886 by the Government of Bombay, where the treatment of sick and lame animals is successfully conducted under the supervision of the professor and teachers of the college. Thus, by the munificence of a private individual, a boon has been conferred on the poorer owners of cattle and horses, and the means of practically imparting clinical knowledge to the students of the

* *Salutri*,—native horse doctor.

† See pages 141-2, *ante*.

college is guaranteed. The teaching is in the English language, and the professional staff of the college have been judiciously selected; the number of students during the past two sessions has been about eighty. The examiners appointed by the Government of Bombay report very favourably of the progress made by the pupils.

The Lahore Veterinary School, established in 1882, continues successful in its operations. The premises at first granted were, two years ago, found to be insufficient, and the late lieutenant-governor, Sir Charles Aitchison, directed that they should be enlarged and rendered equal to the requirements of the school. These additions are now being made. The educational staff is found numerically not strong enough, and measures are in contemplation to add to their strength. The teaching is in the vernacular. About 75 students attended the last sessional course of study, and the examiners, nominated by the Punjab Government, report that the standard of education is steadily improving.

Clothing Department.

The possibility of abolishing either the Madras or the Bombay clothing factory has been, and is still, under consideration.

Proposed abolition of either the Madras or the Bombay clothing factory.

Various measures have been introduced, more especially the utilization of convict labour, in the clothing factories of Bengal and Madras, by which it is hoped reductions in the cost of making up clothing for the army will be effected.

Material advance has also been achieved in the substitution of locally manufactured cloths and serges for the clothing of the army, with gradually improving

Supply of cloth &c., of local manufacture for the Indian army.

results from an economical point of view. The larger portion of the native army in Bengal are supplied with boots manufactured by Messrs. Cooper, Allen & Co. at Cawnpore. The same firm also supplies under contract, about one-half of the supplies of boots annually required for British troops.

Other articles of local manufacture, such as white and *khaki** drill, socks, blacking, &c., have gradually been brought into use, and steps are being taken to extend the system to other supplies of clothing and necessities now obtained from England.

* *Kháki*,—earth-colored.

CHAPTER VII.

MILITARY FINANCE.

The Military expenditure in England and India *Expenditure in England and India.* from the 1st April 1885 to the 31st March 1888 has been as follows :—

Years.	CHARGES.			RECEIPTS.		NET CHARGES.		
	* England.	India.	Total charges.	* England.	India.	* England.	India.	Total net charges.
	£	£	£	£	£	£	£	£
1885-86 ...	3,689,380	15,247,088	18,936,468	59,264	885,953	3,680,116	14,361,135	17,991,251
1886-87 ...	3,564,166	14,620,516	18,184,682	51,440	914,218	3,512,726	13,706,298	17,219,024
1887-88 (Preliminary accounts) ...	3,743,224	15,141,158	18,884,382	43,161	1,017,361	3,700,063	14,123,297	17,823,360
* The estimated expenditure for 1888-89 is ...	3,759,800	14,680,000	18,389,800	33,000	875,000	3,726,800	13,755,000	17,481,800

* The Home figures are exclusive of exchange.

*Home ex-
penditure.*

The annual fluctuations in the home expenditure for the above period were not great, and do not call for any particular remarks. It may, however, be noted that whilst, on the one hand, there has been an appreciable reduction in charges for stores, in consequence of locally manufactured articles being utilized to a greater extent, there has, on the other hand, been a greater quantity of stores required by reason of a larger establishment of British troops being maintained in India, and of important changes in their equipment. The mode of settling War Office claims on account of the effective services of these troops, has also added to expenditure; some of these charges have not yet reached their maximum.

*Effective ser-
vices.*

In 1879 a Commission, under the presidency of Lord Northbrook, was appointed to consider the basis on which the claims of the War Office against the Government of India, in respect of effective charges incurred in England on account of British troops serving in India, should be settled. The labours of this Commission have not yet been brought to a close. Claims up to the 31st March 1882 have, however, been finally settled, and those of 1882-83, 1883-84, and 1884-85 partially so: those for the years 1885-86 and 1886-87 are still under the consideration of the Commission, and the Government of India recently urged that they should be settled speedily.

*Non-effective
services.*

The claims of the War Office on account of the non-effective services for 1882-83 were settled in June 1885; and those for 1883-84 in 1887.

In 1885 it was arranged that, from the 1st April 1884, the non-effective charges on account of the British troops serving in India would be adjusted on a new system, the principal features of which are, (1) that the Indian share of the annual payment to each pensioner, on the basis of past service, should be ascertained in the

same manner as has hitherto been the practice for the purpose of capitalization ; (2) that India should be debited for the financial year in the course of which the retirement occurs with one-half of her annual share, reduced by the chance of the pensioner not living one year ; (3) that for subsequent years India should pay her original share, adjusted by the chance of the pensioner being alive in the year, as ascertained from rates of mortality which the actuaries of the India Office and War Office accept as fair ; (4) that in the case of temporary non-effective pay, such as half-pay, there should be a countercharge in favor of India from the year in which the individual reverts to full pay ; (5) that the life tables to be used should be as follow :—

For Officers,—"Officers' experience, 1800-70." *For wound pensions*,—the same table depreciated ten years. *For warrant officers and men*,—"Pensioners' experience, with and without Indian service, 1822-70." *For widows and children*,—"Finlaison's Government annuity table."

The provisional payments made by the India Office to the War Office up to the 31st March 1885 proved sufficient to meet all claims up to the 31st March 1884, due under the old system, and also the claims for 1884-85 made under the new system.

The War Office claims for the years 1884-85 and 1885-86 have also been closed.

On the representation of the Government of India, the pensions of warrant and non-commissioned officers of departments and on staff employ in India are now apportioned between India and Great Britain, with effect from the 1st April 1883, on the basis of the whole of the service being taken into account in assessing the shares of pension to be borne by each Government, and where there are different rates of pension under British and

Apportionment of the pensions of warrant and non-commissioned officers between India and England.

Indian regulations, the Government which allows the higher rate bears the whole of the difference.

Revision of the memorandum of agreement between the India Office and the War Office.

In 1886 the last revision of the Memorandum of Agreement between the India Office and the War Office took place, showing more particularly the transactions excluded from the contributions made by the India Office for effective and non-effective services generally, and the charges and credits which are to be matters of account between the departments, and the mode of their adjustment.

Indian expenditure.

The principal measures which have affected expenditure in India on account of the army and its departments have been as follow :—

Augmentation of the army.

The strength of the British army in India has been augmented by the addition to the cavalry of one squadron per regiment and to the infantry of 100 privates per battalion, as well as by three battalions of infantry and eleven batteries of artillery, the latter consisting of one battery of horse, two each of field and mountain, and six of garrison artillery. The total increase to the British army in India is therefore about 10,650 men.

The native army in India has been increased by about 4,700 cavalry and 12,000 infantry, of which there were three new regiments of cavalry and nine new battalions of infantry, the balance being made up by increasing the strength of existing regiments.

There has also been an increase of 1,770 native artillerymen, including native drivers for British mountain batteries, and 700 sappers and miners. The total increase in the native army, therefore, is between 19,000 and 20,000.

Suakin expedition.

A contingent of Indian native troops was employed in the expedition to Suakin in 1885, all extra

expenses incurred in connection therewith being defrayed from Imperial revenues.

A proposal was made to the Secretary of State for India that Indian revenues should be relieved of the ordinary cost of the troops and vessels employed at Suakin from the 15th May 1885, the date on which active operations were held to have ceased: the proposal was reiterated, but the Secretary of State declined to move in the matter.

The expenditure in India on account of the special military preparations in 1885-86, in connection with precautions on the North-Western frontier, was as follows:—

Special military preparations, 1885-86.

				Receipts	Expenditure	Net Expenditure.
				Rx.	Rx.	Rx.
1885-86	...	...	...	68,912	2,185,371	2,116,459

Note.—Exclusive of the expenditure which was compiled in the Military accounts of 1884-85.

The home expenditure from the same cause is not shown separately in the home accounts.

The expedition to Upper Burma in 1885-86, and the subsequent occupation of that country caused extra expenditure as follows:—

Burma war, 1885-87.

				Receipts.	Gross Expenditure	Net Expenditure.
				Rx.	Rx.	Rx.
1885-86	...	...	...	25,889	630,679	604,840
1886-87	...	...	...	61,483	1,517,760	1,456,277
1887-88 (preliminary actuals)	...	...	...	69,318	1,467,608	1,398,290
1888-89 (estimated)	...	...	...	...	...	827,000

An officer of the Military Accounts Department accompanied the expeditionary force to Burma in 1885, as field paymaster, but was withdrawn during the following year, to be replaced a few months later in consequence of a special representation from the military authorities on the spot. In May 1888, a circle pay office and a special audit office for commissariat accounts in Burma were established in Rangoon. Service in Upper Burma ceased to be considered "foreign field service" from 1st April 1888, but certain concessions have been continued tentatively.

Sikkim expedition.

Extra expenditure arose and continues in connection with the operations in Sikkim. To date it has been as follows :—

1887-88 (preliminary actuals)	...	Rx. 15,541
1888-89 (estimate)	..	Rx. 180,000

Hazara expedition.

Extra expenditure has arisen in connection with the Hazara expeditionary force, estimated at Rx. 145,000 if the operations last a month.

Other items affecting military expenditure.

The other items affecting expenditure during the years from 1834-85 to date have been as follow :—

Statement shewing measures affecting military expenditure during the years from 1884-85 up to date.

Number.	Measures involving increase in military expenditure	Number.	Measures involving decrease in military expenditure.
	1884-85.		1884-85.
1	Promotion of lieutenants in the Staff Corps to the rank of captain after 11 instead of 12 years' service.	1	Abolition of the Deesa Brigade in the Bombay army.
2	Payment of the British soldier in Indian currency at the rate of exchange for sterling equivalents.	2	Settlement of the scales of railway charges for troops travelling by special trains.

Number.	Measures involving increase in military expenditure.	Number.	Measures involving decrease in military expenditure.
	1885-86.		1885-86.
3	The concentration of troops at Rawal Pindi.	3	Abolition of the grant of bounty to British soldiers for extending their terms of service with the colours in India.
4	Camp of exercise at Delhi ..	4	Revised establishments for horse and field batteries of artillery.
5	Revised rates of pay and allowances for officers of the Army Veterinary Department serving in I.I.A.	5	Re-adjustment of the command allowances of artillery divisions and districts in India.
6	Payment to troops of compensation in lieu of clothing in Indian currency at current rate of exchange for sterling equivalents.	6	The departments of Adjutant-General and Quartermaster-General in India, constituted graded departments [<i>N. B.</i> —This measure neither increases nor decreases the expenditure.]
7	Payment in India of pensions to British non-commissioned officers and men of local corps at the current rate of exchange for sterling equivalents.		
8	Grant of band allowances to volunteer corps.		
9	Reorganization of the commissariat department, by the amalgamation of the supply and transport branches, the substitution of a Commissary General-in-Chief for the Commissary General with the Government of India, and the appointment of a second Commissary-General in Bengal.		
10	Grant of free conveyances by rail to and from their homes to soldiers of the native army going on furlough		
11	Revised rates of pay and allowances for officers of the Army Pay Department and sub-inspectors of army schools.		
12	Increased allowance of practice ammunition to British troops.		

Number.	Measures involving increase in military expenditure.	Number.	Measures involving decrease in military expenditure.
	1885-86.		
13	Re-organization of the corps of Sappers and Miners in the three Presidencies.		
	1886-87.		1886-87.
14	Increase to the strength of, and revised rates of pay for, the Army Medical Staff and subordinate establishments.	7	Reduction of establishments of followers with Bengal infantry regiments.
15	Revised rules regarding the grant of pensions to the native armies.	8	Abolition of interpreters in British regiments.
16	Revised rules for good-conduct pay and half-mounting allowances to the native armies.	9	Revised rules for the grant of rewards for passing in native and foreign languages.
17	Revised rules for the grant of working pay to men of the Royal Engineers.		
18	Payments in India on account of pensions fixed in sterling, ordered to be made at the official rate of exchange of the year of payment.		
19	Increased establishment of horses with British cavalry regiments.		
20	Revised establishment of syces and grass-cutters with British cavalry regiments.		
21	Revised rules for the grant of compensation for dearth of forage to Bombay cavalry regiments.		
	1887-88.		1887-88.
22	Increase in the number of horses maintained in reserve at remount depôts from 930 to 1,200, and in the price paid for remounts.	10	Reduction in the Royal Artillery staff at army head-quarters.
23	A revised scale of camp equipage to be maintained in regimental and ordnance charge.	11	Revised scale of prizes for skill at arms to various branches of the service.
24	Establishment of reserves for the native armies.	12	Revised scales of water and conservancy establishments for the British troops and hospitals in the Bombay Presidency.

Number.	Measures involving increase in military expenditure.	Number.	Measures involving decrease in military expenditure.
	1887-88.		1887-88.
25	Institution of an establishment of master-gunners and park-sergeants.	13	Revised scale of allowances for the charge of transport with regiments.
26	A revised scale of ambulance transport.	14	The appointment of an Inspector-General of Cavalry in India, accompanied by the abolition of the Rawal Pindi brigade command.
27	Various changes in the establishments and salaries in the Ordnance Department in India.	15	Revised establishments and rates of pay of officers of the Army Remount Department.
28	Increase to the number of appointments to the Order of British India.	16	Revision of the gymnastic instructional staff in India.
	1888-89.		1888-89.
29	Revised rates of pay for riding-masters of British regiments serving in India.	17	Reduction and amalgamation of the Judge Advocate General's Departments in all three Presidencies.
30	Grant of bounty to soldiers of the garrison artillery in India desirous of extending their army service.	18	The following privileges peculiar to the Madras Army have been prospectively abolished :—
31	Grant of medals, with annuities and gratuities, for meritorious service and good conduct, to the native armies of India.	(i)	Grant of compensation for dearthness of food to military pensioners.
32	Grant of bronze medals to followers accompanying an army in the field	(ii)	Grant of compensation for dearthness of food to families of native troops on foreign service.
33	Re-organization of the army signalling staff and establishment in India.	(iii)	Grant of full pay and batta to military pensioners from the date of their being struck off the effective strength of their regiments until their arrival at the stations selected by them for residence as pensioners.
34	Arrangements for the recruiting of Gurkhas in Nepal.	19	Revised establishment of followers for Bombay cavalry regiments.
		20	Substitution of service pattern tents maintained for the Viceroy's camp equipage.
		21	Re-organization of the commands and staff in India.

General.

1885.

Abolition of interpreters in British regiments. In connection with the India Military Budget Estimate for 1885-86, certain measures initiated by the Accountant-General, Military Department, were adopted for the reduction of military expenditure in India, the more important of which are the abolition of interpreters in British regiments, and the revision of the establishment of followers.

Revised instructions for payment of British troops. A revised edition of the "Instructions for the payment of British troops serving in India," was issued.

1886.

Family remittances of military officers serving beyond the Indian frontiers. The Secretary of State decided that in future, when officers are employed on military duty beyond the frontiers of India, their family remittances to England shall be restricted to the amounts they are allowed to so remit through Government while serving in India.

Revision of the system of regimental accounts. Special measures were adopted for detecting irregularities in the accounts of regimental paymasters of British corps.

Alteration of the rate of exchange for payment of military pensions in India. Formerly, military pensions, if drawn in India, were converted and paid at the exchange of 2s. 0½d. the rupee. At the instance of Lord Dufferin's Government, the Secretary of State has approved of all such pensions, whether of officers, warrant officers, or widows, when stated in sterling only, being drawn, while their recipients are residing in India, at the rate of exchange annually fixed for the adjustment of transactions between the Imperial and Indian Governments.

Proposals of the Finance Committee. The Special Finance Committee appointed by the Government of India in 1886 to enquire into expenditure in all departments, and suggest economies, submitted for consideration several proposals in connection with military administration and finance (*vide* pages 5

to 11 of Vol. II of their report, and pages 2, 3 and 4 of the Finance Commissioner's Report).

These proposals were classed under the following heads—

I.—As regards the staff and commands.

II.—Strength and constitution of the army.

III.—Organization of the auxiliary departments.

Under the first head the Committee recommended that the offices of the Military Department of the Government of India should be permanently located at Simla; that the Adjutant-General's and Quartermaster-General's Departments should be amalgamated under a Chief of the Staff; that the number of commands and the pay of the general officers holding them and of the general and garrison staff should be revised; and that some important steps should be taken to decentralize military finance.

Under the third head a number of recommendations were made, some of which, modified or altered in certain respects, have been adopted, and will be found enumerated in the table of "Measures affecting expenditure."* The more important proposals undisposed of are as follows:—

- (i) General question of what should be treated as "foreign service," for the Madras army.
- (ii) Revision of the clerical establishments of the Judge Advocate-General's Department.
- (iii) Question of throwing open the Sanawar Lawrence Asylum to the children of civilians and efficient volunteers.
- (iv) Abolition of the Bombay Clothing Agency and transfer of the work to the Madras Agency.
- (v) Reduction of rates for making up clothing regimentally.
- (vi) Revision of the system of accounts and audit of army clothing.
- (vii) Re-organization of the Barrack Department.

* See pages 152-55, *ante*.

1887.

Introduction of "Command" commissariat account offices.

The system of central commissariat account offices was superseded by "Command" commissariat account offices. Trained accountants for the preparation of commissariat accounts, in command commissariat offices, Bengal, classed as "Departmental Accountants, Commissariat Branch, Bengal," under the Controller of Military Accounts, Bengal, were ordered to be instituted.

Revision of the system of obtaining preliminary information of military expenditure

In consequence of arrears being discovered in regard to the adjustment of claims against the Military

*Mr J. Westland, Secy. to the Govt of India in the Financial Department.	} President
Lieutenant-Colonel Colleen, Secy. to the Govt. of India, Military Dept	
Colonel Pritchard, Asst. Genl, Military Dept.	} Members.

Department on account of operations in Burma, a special committee* was appointed to revise the system of obtaining preliminary information of military expenditure as incurred. As a

result of the labors of this committee, whose proceedings were confirmed by the Government of India, the military expenditure of one month in all departments should be known in the Military Department by the 27th of the following month.

Field Service Accounts Manual.

A Manual of Instructions for the preparation, submission, and adjustment of accounts of the army of India on active service was compiled in the office of the Accountant General, Military Department, and ordered to be adopted.

Remarks regarding the present system of factory accounts.

† Colonel A. Walker, R. A., Insp. Genl. of Ordnance, Bengal Circle.	} President.	the Government of India, a Committee† was appointed to inquire into the system of preparation and audit of the annual accounts of the various factories of the Ordnance Department, and to report what measures were considered necessary in simplification and modification
Mr. C. R. Kier- nander, Depy. Auditor Genl.		
Major J. A. Miley, Mily. Acct. Dept.	} Members.	
Mr. J. Douglas, P. W. D., Accounts Branch.		

thereof. The Committee ascertained that the representations of the Finance Committee were based upon facts elicited in the course of their investigations at only one factory, that of the Harness and Saddlery Factory, Cawnpore. After a very careful enquiry into the whole of the arrangements in all the factories and the examiner's office, they recommended that the present system should be continued, and they came to the conclusion that it was the neglect of its provisions which gave rise to the representations which led to the enquiry. These conclusions were accepted by the Government of India.

To entitle the widow of an officer, honorary commissioned officer, or warrant officer to a pension from Lord Clive's Fund, she is required to declare on oath that her husband did not die possessed of property beyond a specified amount. Attempts were made from time to time by the Government of India to have this property disqualification removed, but without success. A small concession, however, has been obtained in this direction in respect of the pensions of widows of honorary commissioned and warrant officers, whereby the disqualification is made applicable only to that portion of their pension which was obtainable from Lord Clive's Fund, and in respect of the remainder of the pension it is waived altogether.

*Improvement
of the title
of widows
to pension
from Lord
Clive's
Fund.*

1888.

Clear rules have been laid down in this year defining the respective responsibilities of the Military and Finance Departments in regard to military estimates in connection with special expenditure.

*Responsibilities
of the
Mily. and
Finance
Depts. in
regard to
military
estimates.*

In this year also instructions have been issued, and arrangements made, by which administrative heads of executive departments will be in a better position to control more promptly within sanctioned budget allotments, the expenditure of their departments, and to

*Control of
military
expenditure
by heads of
executive de-
partments.*

watch the economy with which their administration is conducted. The attention both of these officers and the Controllers of Military Accounts and military account officers generally has been specially drawn to the necessity for a more careful supervision in this respect; and they have been informed that the Government of India lay much stress upon the due performance of this duty, and the exercise of a wise and careful scrutiny of expenditure before it is incurred; and that they should seek out and carry into effect all practicable economies.

*Forecast of
military
expenditure
in 1889-90
and 1890-
91.*

A very comprehensive forecast estimate of probable extra special expenditure to be incurred in the years 1889-90 and 1890-91 on account of re-armaments, coast and special defences, military works and marine requirements, was prepared in the Military Department in July 1888, and submitted to the Financial Department and the Secretary of State.

Changes in the Military Accounts Department.

1884.

*Pay of Con-
troller of
Military Ac-
counts, Ben-
gal.*

In this year it was decided that the higher salary of Rx. 250 per mensem, previously given to the senior Controller, should be drawn by the Controller of Military Accounts actually serving in Calcutta.

1885.

*Location of
the mily. accts.
offices in
Calcutta in
one building.*

The offices of the Military Accounts Department at Calcutta were brought together in one building in this year.

*Proposed re-
moval of the
Mily. Accts.
Dept. from
Madras.*

A proposal to remove the offices of the Military Accounts Department from Madras, either to Bangalore or St. Thomas's Mount, was negatived.

1886.

In 1886 it was decided that, in future, the payment of staff officers and departments in the Quetta district, and the audit of such payments, and of all medical and ordnance expenditure incurred in connection with that command, should devolve on the Military Accounts Department, Bengal.

Transfer of the accounts work in the Quetta district to Bengal.

1888.

A code of regulations for the guidance of officers of the Military Accounts Department in India is under preparation.

Regulations for military accounts officers.

The question of the constitution and organization of the Military Accounts Department in India has recently been fully considered; and the following changes have either been ordered or referred to Her Majesty's Government for sanction:

Reorganization of the Mily. Accounts Dept.

I.—In 1888 revised rules were laid down for the appointment of officers to, and their promotion in, the department. In future, first appointments will be for five years, during which the officers will be seconded in their regiments. During the first year the officers will be on probation in the department; and at its expiration they will be either transferred permanently to the department after passing an examination testing their departmental knowledge and fitness, or revert to regimental employment, at their own request or on the recommendation of the head of the department: this test is to be severer than that hitherto required. Promotions in the department will be made according to merit, not by seniority alone. In future, deserving subordinate members

Revision of rules for appointment to, and promotion in, the Military Accounts Department.

of the department, whose advancement is justified by their good service and qualifications, will be deemed eligible for promotion to the higher grades. It has also been proposed that officers of approved capacity in any other department, whether military or civil, may be brought into the Military Accounts Department in any appropriate grade, whenever in the interests of the public service it may be desirable to do so.

Consolidation of salaries of military accounts officers.

II.—A scale of consolidated salaries for officers of the department has been recommended to the Secretary of State for sanction, in place of the present pay and allowances of rank *plus* staff salaries of grades in the department.

Reorganization of military accounts office establishments.

III.—A scheme is now under consideration for the re-organization of the office establishments of the Military Accounts Department in India, with a view to improving them. The object of the scheme is to divide the existing establishments into two branches :

- (a) A subordinate account service for all India.
- (b) A clerical service for local requirements.

Formation of a fourth circle of military accounts.

IV.—A proposal has been submitted to Her Majesty's Government for the division into two branches of that portion of the Military Accounts Department which deals with the accounts of the Bengal Presidency. It is intended that this fourth circle shall be organized, in the first instance, at Calcutta, by dividing the existing establishments there into two portions for the Eastern and Western divisions of the Presidency, but to be eventually located at Rawal Pindi, as accommodation becomes available.

V.—A proposal has also been made to abolish circle paymasters, except at Bombay and Rangoon.

Abolition of circle paymasters.

VI.—A proposal to introduce inspectors of military accounts has been submitted to Her Majesty's Government.

Introduction of inspectors of military accounts.

VII.—The Accountant General, Military Department, has been constituted head of the Military Account Department, and a recommendation has been made to Her Majesty's Government that the salary of this appointment be increased to Rx. 250 per mensem, instead of Rx. 200 rising by annual increments in five years to Rx. 250.

Constitution of the Accountant-General, Military Department, as head of the Milg. Accts. Department.

VIII.—A revised establishment for the department has been proposed to the Secretary of State, to consist of 31 officers, to be employed as follows :—

Revision of the establishment of the Military Accounts Department.

Controllers ...	...	...	4
Examiners, three each at Calcutta, Madras, and Bombay, and two in the Western Bengal Circle ...	...	...	11
Inspectors of Accounts ...	...	...	4
Paymasters { 1 at Bombay } { 1 at Rangoon }	...	...	2
In charge of the accounts branches of Controllers' offices ...	...	...	4
To provide for the duties of officers on furlough, and for special duties ...	...	...	6
Total ...	...	...	31

resulting in an eventual saving of about Rx. 215 per mensem.

IX.—To test the practicability of paying all Army and Military Department pensioners through civil treasury officers, instead of

Experimental payment of military pensions through civil treasuries.

through military paymasters, this plan has been adopted as an experimental measure in one circle of the Bengal Presidency.

Improvement of the position of Controllers.

X.—Steps have been taken for making the position of the Controller analogous to that of an Accountant-General in the Civil Department, as regards his relations with his Examiners.

Transfer of the accounts of the old military and orphan funds.

XI.—The duties connected with the management of the accounts of the old military and orphan funds in the three presidencies have been transferred from the examiners of medical and fund accounts to the respective examiners of military pay accounts in Madras and Bombay. The same arrangement will be made in Bengal on the formation of the proposed fourth circle of account.

Amalgamation of the offices of examiners of medical accounts, Madras and Bombay.

XII.—The offices of the examiners of medical accounts, Madras and Bombay, have been amalgamated in one at Poona, and it is intended eventually to have but one such examiner for the whole of India.

Transfer of the examiner of marine accounts to Bombay.

XIII.—The transfer of the office of the examiner of marine accounts from Calcutta to Bombay, and its location in the Bombay dockyard from the 1st April 1889, has been ordered. The examiner will then be in direct communication with the Government of India, and released from the control of the Controller of Military Accounts. His salary has been reduced to Rx. 80 per mensem, rising by five equal yearly increments to Rx. 100 per mensem. The appointment of superintendent in this office, on Rx. 40, rising in five years to Rx. 50 per mensem, has been prospectively abolished.

CHAPTER VIII.

MILITARY LEGISLATION.

THE principal legislative measures which have been under the consideration of the Military Department during the past four years are the Indian Army Bill and the Cantonments Bill.

The question of revising the Indian Articles of War *Indian Army Bill.* has frequently been brought to the notice of the Government. Changes in the organization and administration of the army had in some respects rendered those articles either obsolete or defective, and, the necessity for revision on this account having been established, an Indian Army Bill, to take the place of the Indian Articles of War (Act V of 1869), was, after prolonged consideration and discussion, submitted to the Secretary of State for India in 1886. His Lordship's authority for the Government of India to proceed with the Bill is awaited.

The Cantonments Bill, which is to take the place of *Cantonments Bill.* the Cantonments Act, 1880, the Madras Cantonments Act, 1866, and the Bombay Cantonments Act, 1867, has been rendered necessary by defects in those Acts and by the great and increasing difficulty which military officers experience in obtaining houses near their lines or other place of duty, or even within the limits of cantonments. This Bill was submitted to the Secretary of State in July 1888, and will, with His Lordship's concurrence, be passed in time to admit of its coming into force on the 1st of April 1889.

Of the Acts which have been passed by the Governor-General in Council during the past four years, Act VIII of 1887 (*An Act to abolish Military Courts of Requests as established by Indian Military Law*), the Indian Marine Act, XIV of 1887, and the Indian Reserve Forces Act, IV of 1888, were initiated by the Military Department.

The object of the first of these Acts was, by repealing that portion of Indian military law which related to Military Courts of Requests, to place Her Majesty's *Abolition of Military Courts of Request.*

Indian troops, with respect to indebtedness, in the same position as the rest of the British army. In this respect the law enacted nearly half a century ago for the Indian Army was more severe than Parliament had since seen fit to enact for the other branches of Her Majesty's regular forces. Since the Act was passed, Parliament has, by the Army (Annual) Act, 1888, repealed, with effect from the 1st of January 1889, those portions of the Army Act, 1881, which relate to the convening of Military Courts of Requests in India for the adjudication of actions of debt and personal actions against officers of Her Majesty's British and Indian forces.

*Indian
Marine Act.*

The Indian Marine Act, 1887, was passed in pursuance of the powers conferred on the Governor-General in Council by the statute 47 & 48 Vict., c. 38. The leading provisions of that statute may be described as empowering the Governor-General in Council to pass an Act containing penal provisions similar to those of the Naval Discipline Act, which are to be in force against the members of the Indian marine service as long as the vessels to which they belong are between the Cape of Good Hope on the west and the Straits of Magellan on the east. The Act follows the provisions of the Naval Discipline Act (29 & 30 Vict., c. 109) as closely as the circumstances of the Indian service permit or render necessary. The rules of procedure and other rules under the Act were brought into force simultaneously with the commencement of the Act in October 1887.

*Indian Re-
serve Forces
Act.*

The object of the Indian Reserve Forces Act, 1888, was to provide for the regulation of the Reserve Forces of the Indian army. The Act determines the constitution of the Forces, empowers the Governor-General in Council to make rules and orders for their government and discipline, declares their liability to military law, and provides for the punishment, by court-martial or by a magistrate, of reservists who fail, without reasonable excuse, to attend at any place at which they may be ordered to attend or who fail to comply with any rule or order under the Act, or who fraudulently obtain any pay or other sum contrary to any such rule or order.

CHAPTER IX.

FIELD OPERATIONS.

*The Zhob Expedition.**

Towards the end of 1884, on the recommendation of Sir Robert Sandeman, Agent to the Governor-General for Baluchistan, it was decided to send an expedition into the Zhob Valley, to punish Shah Jahan and the Zhob Kakars for repeated raids into British territory.

Artillery.

No 9-1st Brigade, Northern Division.

No 1 Bombay Mountain Battery.

Cavalry.

One squadron, 10th Bengal Lancers

One squadron, 5th Punjab Cavalry.

One squadron, 1st Bombay Lancers

Infantry.

One wing, 1st Battalion Worcestershire Regiment.

One wing, 1st Battalion Loyal North Lancashire Regiment

2nd Battalion, North Staffordshire Regiment.

Two companies, Bengal Sappers and Miners.

1st Bengal Infantry.

45th Bengal Infantry (Sikhs).

4th Punjab Infantry.

Detachment, 1st Madras Infantry (Pioneers).

2nd Bombay Infantry (Grenadiers).

† No. 9-1st Brigade, Northern Division, Royal Artillery.

One squadron, 10th Bengal Lancers.

One troop, 5th Punjab Cavalry.

One squadron, 1st Bombay Lancers.

One company, Bengal Sappers and Miners.

2nd Battalion, North Staffordshire Regiment.

45th Bengal Infantry.

4th Punjab Infantry.

2nd Bombay Infantry.

On the 26th September a force was assembled at Thal-Chotiali, under the command of Brigadier-General Sir O. V. Tanner, K.C.B., who on the 5th October despatched an advance force, under Lieutenant-Colonel Barnes, 10th Bengal Lancers, through the Annambar Gap into the Bori Valley. Sir Oriel Tanner himself, with the main body, left Thal-Chotiali on the 9th October, and established his head-quarters at Dulai, in the Bori Valley on the 12th. Leaving a detachment at that place, under the command of Lieutenant-Colonel Atkins, 1st Bengal Infantry, Sir Oriel Tanner left Dulai on the 18th with a flying column,† and marched straight on Vela, Shah Jahan's fort.

The flying column marched through the Marai Pass without opposition, and arrived at Ali Khel, in the Zhob Valley, on the 20th

* These operations were actually closed before the date of Lord Dufferin's arrival in India. As, however, the results of the expedition were dealt with by His Lordship, a brief account is inserted here.

October. Akhtarzai was reached on the 21st, and Vela on the 22nd, when it was found that Shah Jahan's fort had been abandoned on the approach of the British force. On the following day it was ascertained that a body of tribesmen had assembled towards the north of the valley with the object of opposing the further advance of the expeditionary force. On the morning of the 24th, Sir Oriel Tanner attacked this body, and expelled them from the position which they had taken up at Daulatzai, the enemy losing upwards of fifty men, while the loss on our side was only five wounded, all of the 4th Panjab Infantry. This was the only active opposition experienced by the force.

From Daulatzai Sir Oriel Tanner marched up the Zhob Valley, blowing up the forts of some refractory headmen who had refused to submit, and on the 29th October reached Kajhe, whence a column was detached, under the command of Colonel Armstrong, 45th Bengal Infantry, to Hindu Bagh, for the purpose of coercing a chief of the Khodadzai section of the Saran Kakars. This was satisfactorily accomplished.

The force subsequently marched to Saifullah (whence a column was detached, for survey purposes, to the Badozai Tangi, to the north of the valley) and thence to Mína Bazar. The Kibzai and Músa Khel countries were afterwards traversed, and the objects of the expedition, and the survey of the Zhob Valley, having been satisfactorily accomplished, the force was withdrawn into the Bori Valley about the 20th November, and before the end of the year the troops were dispersed to their respective cantonments.

The energy and judgment which marked the conduct of the expedition received the commendation of the Governor-General in Council.

THE CAMPAIGN IN THE EASTERN SOUDAN, 1885.

In February 1885, the advantage of employing a portion of the Indian army in the operations about to be undertaken at Suakin and in the neighbourhood of that place, against Usman Digma and his fanatical Soudanese followers, having presented itself to Her Majesty's Government, the Secretary of State telegraphed to the Viceroy, requesting that a regiment of native cavalry and a brigade of three regiments of native infantry might be detailed and despatched to that place with all possible speed, fully supplied with camp equipment, regimental transport, and three months' supplies. *The Indian Contingent.*

The 9th Bengal Cavalry was selected for this service, and was forthwith despatched by rail to Cawnpore, where it was quickly equipped as a lancer regiment. The 15th (Sikhs) and 17th Bengal Infantry and the 28th Bombay Infantry were detailed to form the native infantry brigade. A company of the Madras Sappers and Miners (150 strong) was subsequently added to the expeditionary force.

These troops, fully equipped for service, were despatched by rail to Bombay, where, the necessary tonnage having been previously engaged and fitted for their reception, the whole embarked and sailed for Suakin on various dates between the 22nd February and the 2nd March, under the command of Brigadier-General John Hudson, C.B., Bengal Staff Corps. The strength of the force was about 3,000 men.

In addition to the transport (about 2,000 mules, with the necessary attendants) despatched to Suakin for the use of the Indian Contingent, the Government of India also sent to that place, at the request of Her Majesty's

Government, for the use of the British troops to be employed there,—

4,500 camels for baggage transport ;

500 riding camels ;

150 ponies for mounted infantry ;

the whole equipped with the necessary gear and a proper proportion of attendants.

The following were also formed and despatched from India for service with the British troops at Suakin :—

A corps of camel-drivers, 2,000 strong.

A corps of muleteers, 300 strong.

A corps of *bhistis*,* 300 strong.

A corps of *dulh*-bearers,† 500 strong, with 100 Lushai *dandis*.‡

A corps of labourers, 900 strong, of whom 400 were specially selected for railway work.

The requisition for these men and animals was received about the middle of February, and by the 5th of April the whole had been collected, embarked and despatched to Suakin, complete in every respect.

The whole of the Indian Contingent was landed at Suakin by the middle of March, the British portion of the force destined to operate in that part of the Soudan, under the command of Lieutenant-General Sir Gerald Graham, K.C.B., V.C., having already arrived at that place.

On the 19th March a reconnaissance was made to the westward of Suakin, in the direction of Hashin. On the following day Sir Gerald Graham moved out to attack Hashin, at which place the Arabs had assembled in considerable numbers, threatening the right flank of any advance in the direction of Tamai, a position which

* *Bhisti*,—a water-carrier.

† *Dulh* (properly *dolt*),—a sort of litter.

‡ *Dandt*,—a light covered stretcher.

it was necessary to occupy as a preliminary step to the operations which were to be undertaken for the opening of the Suakin-Berber route, and the construction of a railway to the latter place. An action ensued in which the 15th Bengal Infantry had one, and the 17th two men wounded; the 9th Bengal Lancers, in a conflict in the bush, suffered more severely, having lost one native officer and eleven men killed, and one British officer (Major Robertson) and fourteen men wounded. Eventually the enemy were driven back, and a post was established at Hashin.

On the 22nd March, the infantry of the Indian Contingent, together with the company of the Madras Sappers and Miners, was detailed to form part of a force under the command of Major-General Sir John M'Neill, K.C.B., V.C., which was ordered to escort a large convoy of stores to a place called Tofrek, about eight miles to the south-west of Suakin, where a *zariba* was to be constructed for the safety of the stores and water. Sir Gerald Graham had selected this spot with a view to making it a depôt for operations against Tamanieb and Tamai.

By two o'clock in the afternoon the work of constructing the *zariba* had so far progressed that Sir John M'Neill was able to inform Brigadier-General Hudson that he might collect the transport and return with it to Suakin. This was being done when the advanced vedettes came in to report that the enemy were close at hand, in large numbers; and almost immediately after, the cavalry picquets galloped in, closely followed by the enemy, who, without a moment's hesitation, hurled themselves on the British troops.

The 15th Bengal and the 28th Bombay Infantry were, at the moment of attack, formed in line

outside the *zariba*, and standing firm, met the charge of the Arabs with a withering fire, which was sustained with such constancy and with such deadly effect that few of the enemy reached the line. The few who did died on the bayonets of the Sikhs.

The 17th Bengal Infantry, who were on the left of the *zariba*, were less fortunate. The cavalry picquets, galloping in on their front, threw them into confusion, and before they could reform their disordered ranks the Arab spearmen closed with them, bore them back, and pushed them across the *zariba*. In endeavouring to rally them, their commanding officer, Major Von Beverhoudt, was killed, and the regiment sustained heavy loss before the enemy was finally repulsed.

The loss sustained by the Indian Contingent on this occasion was very severe. It was as follows :

15th Bengal Infantry.—Nine men *killed*; eleven men *wounded*.

17th Bengal Infantry.—One British officer (Major Von Beverhoudt) and 20 men *killed*; one British officer (Lieutenant Drury), one native officer, and 32 men *wounded*.

28th Bombay Infantry.—One British officer (Lieutenant Edwards) and one man *killed*; one British officer (Lieutenant Thomson) and nine men, *wounded*; 4 men *missing*.

Madras Sappers and Miners.—Two British officers (Captain Romilly and Lieutenant Newman) and six men *killed*: one British officer (Captain Wilkieson), one native officer, and 19 men, *wounded*; six men *missing*.

Many followers were also killed and wounded, and great loss in transport animals was sustained.

The Indian Brigade returned to Suakin the same day, and during the ensuing week it was employed on escort duty with convoys proceeding to Tofrek,

the *zariba* at which place was gradually stocked with supplies in view to an advance on Tamai. On the 24th and 26th March the convoys were attacked in the bush, but on each occasion the enemy were repulsed with considerable loss. The advance took place on the 2nd April, and on the 3rd, after some desultory skirmishing, Tamai was occupied and destroyed. With the exception of the 17th Bengal Infantry, which was left in garrison at Suakin, the whole of the Indian Contingent took part in this advance. The enemy were subsequently driven from their position on the hills, and it became evident that Usman Digma had no intention of making a stand.

Immediately after the occupation of Tamai the construction of the railway was pushed on.

The Indian Contingent again returned to Suakin, where, with occasional employment on reconnaissance duty, it remained until the 5th May. On that day the 9th Bengal Cavalry and the 15th Bengal Infantry took part in an expedition against the last organized force of the enemy under Muhammad Adam Sardoun, Usman Digma's chief lieutenant, who had assembled a considerable force at the village of Takúl, west of Hashin. The Arabs were surprised, attacked, and dispersed on the 6th, after which the expedition returned to Suakin.

Khartúm having fallen, General Gordon dying, as he had lived, devoted to the cause for which he fought, Her Majesty's Government decided, in May, 1885, to withdraw the greater portion of the troops from Suakin.

In the course of the next few months, the whole of the troops composing the contingent were withdrawn to India, having acquired the highest character for efficiency and gallantry in the field, and earned the commendations of Lord Wolseley, Sir Gerald Graham, and every general officer under whose command they had come.

Buner, 1886.

In the month of December, 1885, some sections of the Búnerwáls, who had for several years been making desultory incursions into British territory, made various petty raids across the Mardán border, and carried away some villagers as prisoners. The people of the Malandri Valley were very prominent in these outrages, and it became necessary to move up a part of the Corps of Guides from Mardán to Rústam, to protect the frontier villages against incursions, and to punish the raiders.

On the 7th January 1886, a small force, consisting of 100 sabres of the 12th Bengal Cavalry and 450 rifles of the Guides Infantry, was moved up from Mardán to Rústam, under the command of Lieutenant-Colonel A. P. Broome, for the purpose of expelling the Búnerwáls from the Malandri Valley. The detachment advanced from Rústam during the night, intending to surprise the Malandri villages at daylight, but falling in by chance with a party of Búnerwáls, the latter made a sudden attack on the head of the column, and fled after killing one man of the Guides and severely wounding Lieutenant-Colonel Hutchinson, the commanding officer of the corps (who died of his wounds on the 9th) and four other men. All hope of surprising the enemy was now at an end; nevertheless as soon as daylight appeared the detachment moved into the valley, in order to carry out the objects of the expedition. Here they found the Búnerwáls prepared to resist them, but after some hours' desultory skirmishing the enemy were driven off with loss, and the village of Súri Malandri burnt. In the afternoon the troops returned to Rústam, and next day to Mardán.

This expedition had the effect of bringing large numbers of Búnerwáls (report said 5,000) into the

Malandri Valley, with the avowed object of plundering the villages in British territory, and as the frontier was in a disturbed condition, the Infantry of the Corps of Guides was moved up to Rústam, their place at Mardán being taken by a wing of the 15th Bengal Infantry from Nowshera. A squadron of the 12th Bengal Cavalry was also moved up to Rústam.

The Government of India subsequently decided on sending a punitive expedition into Búner in the spring of 1886, but this eventually became unnecessary, owing to the submission of the tribe.

The Campaigns in Burma, 1885-88.

In October 1885, consequent on the oppressive conduct of the Burmese sovereign, King Theebaw, to British subjects trading in his dominions in Upper Burma, and in order to put an end to the anarchy prevailing in that country, which endangered the peace of the adjoining British territories, Lord Dufferin found it necessary to organize an expedition for despatch to Mandalay.

Accordingly towards the end of October and in the

Q-1st Royal Artillery.
No. 9-1st Brigade, Cinque Ports Division,
Royal Artillery.

No 3-1st Brigade, Scottish Division, Royal
Artillery.

No. 4-1st Brigade, North Irish Division,
Royal Artillery.

No. 4 Mountain Battery, Punjab Frontier
Force.

No. 1 Bombay Mountain Battery.

Two Companies of Bengal Sappers and
Miners.

Three Companies of Madras Sappers and
Miners.

One Company of Bombay Sappers and Mi-
ners.

1st Madras Infantry (Pioneers).

early part of Novem-
ber 1885, a force, com-
posed as shown in the
margin, was embarked
partly at Calcutta and
partly at Madras, and
by the 10th of the
latter month the whole
had been landed at Ran-
goon, where Major-Gen-
eral H. N. D. Prender-
gast, C.B., V.C., assumed
the command.

1st Infantry Brigade.

2nd Battalion Liverpool Regiment (8th).
2nd Bengal Infantry.
11th Bengal Infantry.

2nd Infantry Brigade.

1st Battalion Royal Welsh Fusiliers (23rd).
21st Madras Infantry.
25th Madras Infantry.

3rd Infantry Brigade.

2nd Battalion Hampshire Regiment (67th).
12th Madras Infantry.
23rd Madras Infantry.

The strength of the force was about 2,600 British and 6,000 native troops. These were joined at Rangoon by a Naval Brigade, of a strength (including officers) of nearly 450. A squadron of Madras cavalry was subsequently added.

The troops of the expeditionary force were quickly pushed up to the frontier. On the 14th November the advance took place and the frontier was crossed,—and the same day a steamer belonging to King Theebaw was captured by the gun-boat *Irrawaddy* and the launch *Kathleen*, with the loss on our side of only one man wounded.

On the 17th Major-General Prendergast arrived at Gwe-Gyaung-Kamyo, on the left bank of the Irrawaddy, and landing a portion of his force, drove the Burmese troops out of the fort at that place. At the same time another portion of the force was disembarked on the right bank of the river, and in the course of the day, after a sharp contest, it drove the enemy out of their entrenchments at Minhla. The loss of the British troops amounted to one officer (Lieutenant Dury, 11th Bengal Infantry) and 3 men killed, and four officers and 23 men wounded; that of the enemy, in killed, wounded and prisoners, amounted to nearly 500.

Leaving a small detachment to hold Minhla, Major-General Prendergast continued his advance up the Irrawaddy on the 19th November, and after some trifling affairs with the enemy at Pakoko and Myingyan, the British force reached Naza on the 26th, where it was met

by an envoy from King Theebaw, begging for an armistice. General Prendergast refused to suspend operations, and dismissed the envoy with an intimation that if the King would surrender himself, his army, and Mandalay, and if the Europeans in the city were unharmed, he would spare the King's life. The General continued his advance on the 27th, and when in sight of Ava was again met by the envoy, who reported that the King would accede to all demands. In the course of that day the Burmese troops at Ava and Sagaing laid down their arms. On the 28th the advance on Mandalay was continued, and in the afternoon of the same day the troops were landed. On the 29th King Theebaw surrendered, and some days later was sent down the river under escort, and eventually deported to India.

In December, General Prendergast pushed on to Bhamo, occupied that place and established a post there.

On the 1st of January 1886, Upper Burma was declared to be annexed to the British Empire.

Shortly after this Lord Dufferin himself proceeded to Burma to observe on the spot the state of affairs in that country. His Lordship's views regarding the operations above described and the results accruing from them were expressed in a speech delivered by him at Mandalay on the 17th February 1886, which, it is thought, may be here suitably introduced. His Lordship said—

*Visit of Lord
Dufferin to
Burma.*

“SIR FREDERICK ROBERTS AND GENTLEMEN,—As this is the first time I have found myself in the presence of the Commander and chief officers of the army serving in the field in Upper Burma, I desire to take the opportunity of proposing to you the health of Sir Harry Prendergast and of all those, both officers and men, British and native, who have served under him during the recent successful campaign, and with the toast I will couple the names of the officers and men of the Naval Brigade, as well as of the officers and

men of the Burmese Volunteer Corps. It is needless for me to repeat what is known to all, that the invasion of Upper Burma was undertaken with regret by the Indian Government. We had no quarrel with its inhabitants, and the prospect of its conquest, whatever might be the ultimate advantage, was certain to be fraught with immediate expense, anxiety and embarrassment. On the other hand, the existing relations between ourselves and the Burmese Court had become intolerable, inasmuch as they were fast tending to jeopardise the security and most vital interests of our own territories. We, therefore, chose the lesser of two evils, and determined to put an end to the disastrous rule of a prince who was a curse to his own subjects and an impossible neighbour. But in directing General Prendergast's advance upon Mandalay, the Government of India reminded him that it would be his duty to come as little as possible into collision with the people of the country, who are kindred in blood, religion and in all their material interests, with our own subjects in Lower Burma. How admirably General Prendergast and those serving with him have executed those directions, it is impossible to overstate. By rapidity of movement, by skilful strategy, by the exercise of humane forbearance, and the assumption, whenever possible, of a conciliatory attitude, General Prendergast succeeded, with comparatively little loss upon our side, and, what was greatly desirable, with the infliction of a minimum of punishment upon those who were opposed to us, in occupying Mandalay, in capturing its king, and in taking possession of the country.

"And believe me, gentlemen, that to have led a British army into an enemy's capital in such a manner is, under the circumstances, far more creditable to him, and to those associated with him, than would have been a costly victory, however glorious, on a fiercely-contested field of battle. Nor will his countrymen fail to appreciate the sense of duty which has enabled him and his army to win their stainless laurels. The annals of continental warfare show how a ruthless general may wilfully trace his name in letters of blood on the pages of history. General Prendergast has chosen the better part, and, as a consequence, has enabled me to ascend the river, pass along the streets of the town, and enter the palace amidst the ranks of a smiling, trustful, and reconciled population. Again, it is a quality of success to conceal from public notice the

many chances of failure which have beset, on all sides, the enterprise which it has crowned; but those who may hereafter study the nature of our recent operations, will not fail to appreciate what disastrous consequences might have ensued had slackness or indecision on the one hand, or recklessness on the other, directed the movements of our troops. In the name, then, of his Queen and country, and in the name of the Government of India, I beg to tender to General Prendergast, his officers and his men, my warmest thanks; and in doing so, I would desire to extend my expressions of gratitude to all those civil officers who so ably seconded his endeavours, to Mr. Bernard and to Colonel Sladen, to whose courage and knowledge of the people and of their language we are so much indebted for the surrender of the king, as well as to their various assistants. This, however, is neither the time nor the occasion for me to particularize individuals. In due course an official report of all the recent occurrences will be forwarded to the Government of India, which will then have an opportunity of bringing to the notice of the Sovereign the names of those who may have specially distinguished themselves. In the meantime, there is one announcement I am authorized to make, namely, that Her Most Gracious Majesty, with the advice of her ministers, has been pleased to grant a gratuity of three lakhs of rupees to the field force serving in Upper Burma.

“And now, gentlemen, it only remains for me to hope that the work of pacification, under the auspices of the civil officers, will meet with the same success as has crowned our military efforts. For some time, indeed, they will still need the support and assistance of the troops, who have already shown with what patience and energy they can discharge the peculiarly harassing duties imposed upon them by the necessity of the suppression of dacoity, duties far more distasteful to regular troops than the hardships of open warfare. We are all aware, however, from previous experience, that it might take a considerable time, even after the constituted authorities of the country had made their submission, before absolute tranquillity would be restored. It took two years before Lower Burma settled down after the conquest of Pegu. As we all know, from time immemorial, dacoity has been the traditional weakness of the Burmese people. Unfortunately, under the weak and disastrous rule of King Theebaw, gang robbery became rife

from one end of the country to the other, and this unhappy state of things has, of course, been still further stimulated by the disbandment of his army, and the confusion and disturbance in men's minds which the war and the sudden change of Government were certain to entail. But I am glad to learn, on all hands, that district after district, under the supervision of our British officers, is being reclaimed from the reign of terror by which it was dominated. Above all things I rejoice to see that there is not the slightest sign of anything approaching to partizan warfare against ourselves, and that whenever a collision takes place between our troops and any native combatants, it is not that the English posts have been attacked, but that our soldiers have succeeded in overtaking various bands of marauders, acting without concert, who have been burning and pillaging harmless and unprotected villages. These excesses the Government of Her Majesty has decided to terminate at every risk and cost. With this view, and in order to give full effect to the Proclamation issued on the 1st of January, by which Upper Burma was declared for ever annexed to the British Empire, the country will be at once placed under the supreme and direct administrative control of British officers, whose experience and energy will enable them, I trust, to repair in a few years the loss and injury entailed upon it by the misgovernment of its former ruler, to restore the security of life and property, and to raise it to the same high level of individual comfort and commercial prosperity as is enjoyed by the inhabitants of Lower Burma under an analogous *régime*. Though some months, or perhaps years, may elapse before we have seen the realization of all our hopes, I have no doubt that ere a decade has passed away, we shall be able to reckon the inhabitants of Upper Burma amongst the most contented and prosperous of Her Majesty's subjects; and, when the pen of history shall eventually trace the causes and the results of the conquest of Burma, the good service which Sir Harry Prendergast and his gallant companions in arms have rendered their Queen and country at the most momentous period of the recent crisis, will be honorably recorded."

Dacoit disturbances.

With the occupation of Bhamo the first phase of the war in Burma terminated. The previous mal-administration of King Theebaw had, however, produced much confusion throughout the country; bands of dacoits,

mostly disbanded soldiers, infested the districts, and Mandalay was scarcely occupied when it was found necessary to move detachments into the adjacent country to disperse these marauders. Similar disturbances took place in other parts of the newly conquered territory, and detachments from the various posts had constantly to move out against bands of dacoits. This led to numerous petty skirmishes, in which, though the dacoits usually received heavy punishment, many valuable lives were lost on our side. The disturbance spread even into the long settled districts of Lower Burma, and the troops in that part of the country had much harassing duty and sustained many casualties before they succeeded in suppressing the dacoits and restoring order. It is not proposed to enter into details of these minor engagements, a mere list of which would fill many pages.

These disturbances necessitated the despatch to Burma of considerable reinforcements, and during 1885-86, two native mountain batteries, five regiments of native cavalry, a company of sappers, six battalions of British and twenty of native infantry (drawn from the three presidencies), besides several batteries of Royal Artillery, were added to the troops already in the field. A respectable force of mounted infantry was also organized. These additions raised the strength of the troops on service in Burma to 7,000 Europeans and 18,000 natives; and to these were added from time to time, a force of nearly 18,000 military police.

The visit of Lord Dufferin to Upper Burma in February 1886, has already been mentioned. It may be remarked in this place that the early reinforcement of the troops in that country, and the formation of the military police levies, were in a great measure due to His Lordship's observation of the existing condition of affairs there, and the opinion he formed on the spot in

regard to the probability of continued and increased local disturbance.

Major-General G. S. White, c.B., v.C., was appointed to the command of the forces in Upper Burma on the 1st April 1886, on the departure of Major-General Sir H. N. D. Prendergast, K.C.B., v.C. In October 1886, when measures were initiated for the effectual suppression of the dacoits, Lieutenant-General Sir H. T. Macpherson, K.C.B., v.C., was appointed to take the command of the whole of the forces, and to direct the operations; but this distinguished officer unfortunately died of fever shortly after his arrival in Upper Burma.

*Visit of the
Commander-
in-Chief
in India
to
Burma.*

In consequence of this event and having in view the large number of troops in Burma, and of the extended operations which it would be necessary to undertake, the Government of India arranged that General Sir Frederick Roberts, Commander-in-Chief in India, should transfer his head-quarters temporarily to Burma, and assume supreme command of the whole of the troops in that country. His Excellency accordingly proceeded to Burma, and remained there until February 1887, when he returned to India. He was succeeded in the command of the troops in Upper and Lower Burma by Lieutenant-General Sir C. G. Arbuthnot, K.C.B., Major-General White continuing to command the troops in Upper Burma during the visits to Burma of both Sir Frederick Roberts and Sir Charles Arbuthnot.

A brief account of the principal operations carried out in Burma during the years 1886-88, and of those which are to be undertaken during the winter of 1888-89, will now be given.

OPERATIONS AGAINST DACOITS AND INSURGENTS.

I.—Ava, Mandalay, Sagaing, and Kyoukse Districts.

After the capture of Mandalay, the surrounding districts were over-run by dacoits and disbanded soldiers

of Theebaw's army. Detachments were sent out against them, and in one of the first encounters, at Oungdaw, Lieutenant Cockeram was killed. Numerous skirmishes took place, but from want of troops some time elapsed before effective measures could be taken for the suppression of disturbances. In October, 1886, reinforcements having been received, Brigadier-General East began the work of pacification, but it was not until February 1887, after several months' harassing service, that the various bands of dacoits were hunted down and dispersed, and order to some extent restored in these districts.

II.—Bhamo and Mogoung Districts.

Subsequent to the occupation of Bhamo in December 1885, nothing of importance occurred in these districts until February 1886, when an expedition was sent to Mogoung, which returned in the following month without having experienced any opposition.

In April 1886, Captain Wace, with a detachment of about 125 men, with two guns, proceeded from Bhamo against the Khatran Sawbwa in the Kachin Hills. He encountered considerable opposition from the Kachins, and after penetrating beyond Mansi, had to retire without accomplishing the object of the expedition,—the destruction of Khatran.

On the 19th May a force of about 600 men, commanded by Lieutenant-Colonel Fitzgerald, 26th Bengal Infantry, left Bhamo for Khatran to avenge outrages committed by the Ponkan Sawbwa on Samadi. On the 24th the force was within ten miles of Khatran, and an advance on that place was to have been made on the 25th, but in consequence of the representations of the political officer with the force, the expedition was abandoned at this point, and the force returned to Bhamo without having effected its object.

On the 26th May a band of Shans and Kachins was defeated at Petsút, near Katha, by a detachment under Captain Hastings.

Subsequent to this little of importance occurred until the despatch in November 1886, of the Wuntho expedition, which will be noticed further on.

III.—Ningyan, Wundwin and Yemethin Districts.

In November 1885, it having been ascertained that large bands of Theebaw's disbanded levies were moving southward through the Wundwin-Yemethin country, a force was detached from Toungoo to Ningyan, under the command of Colonel Dicken, 3rd Madras Infantry, who, after a few skirmishes, occupied the latter place early in December.

In February 1886, Colonel Dicken moved out with a column into the Yemethin District, where large bodies of the enemy had gathered. A body of 200 Shans were defeated at Thayetpin, and Yemethin was occupied on the 18th. The whole of the surrounding country was, however, in the hands of the enemy, and during the next few months frequent engagements took place; in all of these the enemy were defeated, but it was not until June that the rebel bands were entirely dispersed.

Towards the end of June disturbances began in the Ningyan District, and though the rebels were defeated whenever they came in contact with our troops, they still continued to make head in large numbers.

In September the greater portion of these districts was in the hands of the enemy, but in the following month, reinforcements having arrived, Brigadier-General Lockhart began systematic operations for the expulsion or destruction of the rebel bands. Moveable columns were despatched in various directions; several engagements occurred, and some of the principal leaders

of the enemy having been killed (amongst them "the Kemendine Prince," who fell in an action at Thayetpin on the 1st January 1887) by February 1887, the whole country from Hlaingdet in the north to Ningyan in the south, and from the Shan Hills in the east to the Yoma Hills in the west, was practically freed from the presence of the dacoit bands.

IV.—Myingyan and Meiktila Districts.

In January 1886, a pretender styling himself "the Kemendine Prince," having gathered together a band of rebels, began creating disturbances in the Myingyan District. He was surprised at Kanna by a detachment under Major Ommanney, 11th Bengal Infantry, and his band dispersed with considerable loss. In the following month parties of rebels were defeated at Sameitkyon and We-loung. In March, a column under the command of Colonel LeMessurier, Liverpool Regiment, encountered a body of rebels, under the Kemendine Prince, at Yendaw, fourteen miles from Meiktila, and defeated them, killing 60 and taking 25 prisoners. During the period from April to October frequent skirmishes with rebels and dacoits took place.

In November 1886, Brigadier-General Anderson organized six moveable columns to operate in the Myingyan and Meiktila districts. These scoured the country in all directions, and, after some months' harassing service, succeeded in restoring comparative tranquillity.

V.—Shwebo District.

The Shwebo District was occupied in December 1885, by a force under the command of Brigadier-General Norman. A number of rebels and disbanded soldiers of King Theebaw's late army were in arms in the district, and in the course of the month skirmishes with these took place at Shwebo, Zi-daw and Sibauktaga. On the

11th January 1886, a body of 2,000 rebels under Prince Maung Hmat was defeated by Lieutenant-Colonel Simpson, 12th Madras Infantry : on this occasion Lieutenant-Colonel Simpson and two other officers were wounded. Towards the end of the same month, Major Williamson, Royal Welsh Fusiliers, defeated a large body of dacoits under the prince above named and Hla-u, a noted *boh* or leader, near Sagaing. On the 12th April, Prince Maung Hmat sustained another defeat at Wugum on the Mu River, and a few days later a band of his followers was cut up at Kinu. On the 19th of the same month a body of Shans, 250 in number, was repulsed in a daring attack on a British post at Kyouk-Myoung. During the period from May to September frequent engagements with parties of insurgents took place in the district, in most of which the enemy sustained severe loss, while there were comparatively few casualties on our side. In these operations Lieutenant Huggins, 21st Madras Infantry, distinguished himself by his successes against the dacoit bands.

In October reinforcements were received, and Brigadier-General Stewart immediately proceeded to act against the rebel leaders in the district (Boh Nga-Yine and Boh Hla-u). In the course of the following cold season, both these leaders were expelled from the district, and their followers dispersed.

VI.—*Minbu District.*

This part of the country was to a great extent kept in order during the early part of 1886 by a force under the command of Colonel Hamilton, but on the withdrawal of that force on the approach of the hot weather, two dacoit leaders, Boh Shwé and Ottama, began to create disturbances, and Mr. Phayre, Deputy Commissioner, and Captain Dunsford having been killed in attacks on bodies of these rebels, the latter became

emboldened and created much disorder in the district, which continued for several months. The first check to the proceedings of Boh Shwé was given by Major Gordon, 2nd Bengal Infantry, who, attacking the dacoit leader at Napeh on the 19th June, defeated him and captured his stronghold. In the following month, however, it became necessary to withdraw from this post, on account of its unhealthiness, and this encouraged the enemy, who about the same time attacked the British post at Salin. In relieving this post and driving off the rebels, Captain Atkinson of the Hampshire Regiment was killed.

Frequent skirmishes with the rebel bands occurred during the subsequent months, but eventually Brigadier-General Low drove Boh Shwé into the Arakan hills, and by January 1837, the district was comparatively quiet.

VII—Chindwin District.

In December 1885, intelligence having been received that some employés of the Bombay-Burma Trading Corporation had been murdered near Mingin, and that others were in danger at Kindat, a detachment of 200 rifles was sent from Mandalay into the Chindwin District, under the command of Major Campbell of the 23rd Madras Infantry. No opposition was encountered. The detachment reached Kindat on the 31st December, when it was found that Colonel Johnstone, with a force from Manipur, had already captured the place and relieved the Europeans, who were confined in a stockade. Leaving 100 men at Alôn, Major Campbell returned with the rest to Mandalay.

The detachment at Alôn was reinforced in February 1886 by 100 men from Myin-Mu, under Colonel Baker of the Hampshire Regiment. This detachment was relieved in April 1886 by one from the 18th Bengal

Infantry. In the same month a force of about 240 men and two guns, under Lieutenant-Colonel Toker of the 18th Bengal Infantry, was sent up from Myingyan for the occupation of the Chindwin valley. Mingin was occupied on the 20th of that month, but in May a rebellion broke out in the district, and several attacks were made on British posts. Disorder increased during that month, and it became necessary to send out many flying columns against the rebels. These disorders delayed the advance on Kindat, but that place was occupied on the 10th June.

Disorder broke out also in the Kalé, Alôn and other districts, and in the country above Kindat, and these were further complicated by raids of the wild Chins on the villages on the right bank of the Chindwin. These disturbances necessitated the movement of numerous small detachments about the country, and petty skirmishes were of frequent occurrence. The most important of these engagements occurred at Myogi in November 1886, when Lieutenant Fryer, 18th Bengal Infantry, with a detachment of 85 men, defeated a body of 1,000 insurgents and killed about 60 of them. In this engagement Lieutenant Fryer was severely wounded, and the detachment sustained a further loss of six men killed and wounded.

It was not until April 1887 that the Chindwin Valley was reported to be comparatively quiet, but since then some isolated skirmishes with small bands of insurgents have taken place.

VIII.—Kubo Valley.

In December 1885, Colonel Johnstone, Political Agent in Manipur, having heard that some European employés of the Bombay-Burma Corporation were in danger at Kindat, in the Chindwin Valley, marched

from Manipur with a detachment of 50 men of the 4th Bengal Infantry and about 800 Manipuri troops. He reached Kindat on the 25th, when the Burmese authorities submitted: but a few days subsequently a revolt took place, and there was some fighting on the 4th and 5th January 1887. On the latter date a force under the command of Major Campbell, 23rd Madras Infantry, which had been despatched up the Chindwin River from Mandalay, arrived at Kindat; but finding Colonel Johnstone already in possession of that place, this force returned down the river a few days later, and Colonel Johnstone soon after went back to Manipur with the troops under his command.

In the early part of 1883 attempts were made to open out communication between Assam and Upper Burma *viâ* Manipur; and in March, Tamú, in the Kubo Valley, was occupied by a detachment of three companies of the 4th Bengal Infantry.

On the 11th May, Major Trotter, Political Officer, with about 100 of the 4th Bengal Infantry, advanced from Tamú towards Kindat; at Pantha the detachment was attacked by 600 dacoits, who were defeated with considerable loss, but Major Trotter (who had received a severe wound, of which he subsequently died) found it necessary to return to Tamú.

Reinforcements reached Tamú in June, and on the 19th of that month Major Hailes, 4th Bengal Infantry, who was in command, attacked the enemy's stockades at Chanyone, some three miles from that place. In this affair Major Hailes was severely wounded. Captain Stevens, 42nd Bengal Infantry, succeeded him in the command.

Some skirmishes with bands of dacoits occurred in the neighbourhood of Tamú in July and August, but nothing of importance took place until the 10th October, when reinforcements from Assam having reached

Captain Stevens, that officer attacked the enemy in their stockaded position at Chanyone, and captured it after an hour's fighting, inflicting severe loss on the rebels. Some skirmishes took place during the succeeding cold season, but by March 1887, the Kubo Valley was freed from the presence of dacoit bands.

Between October 1886 and February 1887 the following organized expeditions were undertaken :—

- I. Field operations between the rivers Mu and Chindwin.
- II. The Mogok (Ruby Mines) expedition.
- III. The occupation of Yaw and operations against Kan-le.
- IV. The occupation of Wuntho.
- V. Operations in the Shan States and occupation of Maing-Zouk.

The object of the operations between the Mu and the Chindwin was to traverse the whole of the country between these two rivers, which had for some time been overrun by dacoits under the leadership of Hla-u, Min-u and other notorious chiefs, and to search out and punish all bands of dacoits and capture their leaders. For this purpose four columns were set in motion on the 15th November, from Myin-mu in the south, Magyizauk in the east, Yeu in the north, and Alôn in the west, and rapidly moved through the district, disarming the villagers on all sides, and clearing the country of the dacoits. Although the troops did not succeed in capturing Hla-u, his followers fell away from him, peace and order were once more established in the tracts which he had overridden, and in April 1887 the proscribed leader was killed by one of his most trusted followers.

The expedition to Mogok was undertaken in order to establish the right of the British Government to the possession of the valuable and far-famed Ruby Mines of Upper Burma, as successors to the deposed King. The headmen and inhabitants of the neighbouring Shan

villages, who were in possession of the mines, had resolved to dispute that right, and opposed the advance of the British troops. The column which was despatched for this purpose encountered considerable opposition from the Shans, but the latter were routed on every occasion, and the district eventually became tranquil; the industry in the mines was re-opened, and British rights assured.

The object of the operations in the Yaw country was to establish British authority in the district, which had been for some time in an unsettled state, to protect the trading interests in the country, and to collect the revenue, which had fallen into arrears. Three columns started in December 1886, from Pauk, Pakoko, and Alôn on the Chindwin, to occupy Kan-le, at which place a pretender named Shwe-Gyo-Byu had set himself up as prince, and collected a number of adherents. The enemy were several times routed with loss, and on one occasion a troop of the 1st Bombay Lancers, with the Pakoko column, cut up a considerable number of the dacoits near Alegún. The whole district has since settled down.

The occupation of Wuntho was necessitated by the failure of the Sawbwa to yield to British authority and to pay up revenue. Endeavours were made to induce this influential chief to acknowledge the supremacy of the British Government, but on an ultimatum being sent to him to meet the Commissioner of the Northern Division on a day named, he fled from Wuntho, and a detachment of British troops were ordered to occupy the place, which they did on the 15th January 1887. The two columns which advanced from Katha and Shwebo towards Wuntho met with some opposition, but the enemy were routed with loss, and eventually the Sawbwa complied with our conditions and returned to Wuntho.

Strong posts have been established at Kaw-lin and Hlut-taik, and Mawlu has been occupied by the Mogoung Levy.

The operations in the Shan States were undertaken for the purpose of supporting the Sawbwa of Nyoung-ywe, to collect any information that might be necessary for future action on the Shan plateau, and to cultivate friendly relations with the various Shan states, whilst avoiding active interference in their internal quarrels.

The force told off for these purposes assembled at Hlaing-det in January 1887, and after routing the adherents of the Sawbwa of Yat-Zouk, who had occupied an entrenched position at Ku-gyo, threatening the left flank of the advancing column, they reached Nyoung-ywe without further opposition, and constructed a fort (Fort Stedman) and a residency at Maing-Zouk near Inle-wa. The general result was satisfactory, and several other Sawbwas have made their submission to the political officers in the Shan States.

During the cold weather of 1886-87 the principal lines of communication throughout the province were opened up, over a thousand miles of jungle clearing along native roads having been effected, and nearly two thousand miles of permanent telegraph line laid out or commenced. The population were gradually disarmed, the weapons taken being distributed to trustworthy persons to provide for the protection of the villages. A general system of flying columns and patrols was established throughout the country, resulting in the gradual restoration of order in the province, the breaking up of the greater portion of the numerous bands of dacoits that infested the country, and the capture or flight of the principal leaders of rebellion.

Order having thus in a great measure been restored in Upper Burma, in G. G. O. No. 434, dated the 16th

June 1887, the Governor-General in Council conveyed his thanks to Sir Frederick Roberts, not only for the skilful plans of operations devised by him in his capacity of Commander-in-Chief in India, but also for the able and vigorous manner in which he had personally directed and carried out those plans while holding the immediate command of the army in Burma. His Lordship also noticed in suitable terms the services of the late Sir Herbert Macpherson, and of Sir Charles Arbuthnot and Sir George White, who had, in turn, commanded the forces in Burma and the Upper Burma Force, and of the various brigadier-generals and other officers who had distinguished themselves during the campaign.

It now only remains to notice briefly the military operations which the General Officer commanding the forces in Upper Burma proposed, with the concurrence of the Chief Commissioner, to undertake during the cold season of 1888-89. These were as follow :—

*Proposed
operations
for the cold
season of
1888-89.*

- I. Against the Kachin tribes in the neighbourhood of Mogoung.
- II. Against the Chin tribes.
- III. Against Saw-la-paw, the Chief of Eastern Karenni.
- IV. A small column to join hands with a proposed expedition from Chittagong against the Shendús.
- V. Against the Shan chief of Et-hna-toung.

Of the above the first, second and third were classed as absolutely necessary, and the fourth and fifth as very desirable: the former have been sanctioned, and the two latter postponed for the present.

The expedition against the Kachin tribes is regarded as requisite for political reasons; it is to be subdivided as follows :—

- (i) Against the Lepei tribe, in the hills north of Mogoung.
- (ii) Against the Ithi tribe, south of Mogoung.
- (iii) Against the La-toung tribe, north-east of Mogoung.
- (iv) Against the Maran tribe, to the west of Sengbo.

The most important of these is that against the Lepei Kachins, a very powerful and influential tribe, the submission of which is expected to lead to that of the others, and render the remaining three expeditions unnecessary.

For these expeditions it has been arranged to increase the Mogoung levy from 500 to 1,000 rifles, and to detach a force of two guns of No. 2 Bengal Mountain Battery and 50 British infantry from Bhamo; but as the police levies will probably not be available in time, a detachment (220 men) of the 17th Bengal Infantry, (under orders to relieve the 12th Bengal Infantry in Burma during the approaching cold season) has been sent from India for the purposes of this expedition.

For (II) the Chin expedition, the following force has been detailed:—

- 2 mountain guns,
- 1 company of Madras sappers,
- 70 native mounted infantry,
- 650 native infantry.

Sir George White has also been authorized to draw on the 44th Gúrkhas for any additional force he may require for offensive operations.

In addition to the above about 800 men with two guns will occupy posts on the Chin frontier, to repel raids.

The plan of operations approved is to move on Ywama, the chief town of the Tashon Chins, in two columns,—one (under Brigadier General Faunce *viá* Pokoko and Pauk) and the other *viá* Kalewa.

For (III) the expedition against Saw-la-paw, it is proposed to march four small columns (under the command of Brigadier-General Collett, C.B.) against his capital, Sawlôn.

In the autumn of 1888 proposals were made to send an expedition against the Shendu tribes, lying to the east of Chittagong, for the double purpose of avenging the death of Lieutenant Stewart, Leinster Regiment, who had been killed in the preceding cold season while surveying in those parts, and of exploring the country between Bengal and Burma, and it was intended that this expedition should operate in conjunction with a force to be despatched from Upper Burma against the Chins. After much discussion, however, the conclusion was arrived at that it was not desirable to undertake military operations against the Shendus for the present.

Proposed Expedition against the Shendus.

After the above decision was arrived at the Government of Bengal applied for the services of 250 Gúrkhas, to be placed along the Shendu frontier, in support of the police, in view of probable raids by the tribes in the neighbourhood during the coming cold weather. It was decided that a detachment of the strength named should be given, as a purely temporary measure, and employed as a reserve to the police, who would garrison the frontier posts, but that they should not be Gúrkhas. A detachment of the 9th Bengal Infantry was despatched to Chittagong accordingly on the 8th of November.

Sikkim, 1888.

In the year 1886 a considerable body of Tibetan troops crossed the frontier into Sikkim, and established themselves at Lingtu, where they constructed a fort, blocking the road through the Jalep Pass leading into Tibet. It was suspected that they had the countenance of the Raja of Sikkim, who was under the influence of the Lamas at Lhasa, and had latterly shown an unfriendly disposition towards the British Government.

The latter being under treaty obligations to protect Sikkim, it was necessary to expel the intruders, but it was decided first to try the effect of diplomatic action through the Court of Peking, to which Tibet is tributary. A year passed in various negotiations, and the winter of 1887 having set in before any definite settlement was arrived at, it became necessary to postpone further action. A wing of the 32nd Pioneers was, however, moved up to Darjiling, to repair and open out the roads from that place towards Lingtu, with an ultimate view to operations in the spring, should such become necessary.

In February 1888, diplomatic action having failed to effect the removal of the Tibetan troops from Sikkim territory, orders were issued for the concentration on

No. 9-1st Brigade, Northern Division, Royal Artillery (4 guns).

200 men of the 2nd Battalion Derbyshire Regiment.

A wing of the 13th Bengal Infantry.

The 32nd Bengal Infantry (Pioneers).

the frontier, at Pedong, of a force under the command of Colonel T. Graham, Royal Artillery. This force was to advance on Lingtu on the 15th March, if that post had not been evacuated by the Tibetans before that date, and it was

declared that the object of the expedition was to vindicate the treaty rights of the British Government in Sikkim and over the road to the Jelep Pass.

The officer commanding the force received strict injunctions against invading Tibet, it being the object of the Government of India to confine their efforts to the vindication of their own rights, and to avoid anything approaching to ulterior complications with the Government of Tibet or the Tibetans. At the same time it was explained that these instructions were not intended to preclude the commanding officer, if attacked, from pursuing his assailants across the border.

The troops detailed for the expedition were all assembled at Pedong by the 15th March, and on the 16th Colonel

Graham began a forward movement with 100 of the Derbyshire Regiment, 300 of the Pioneers, and two guns. A similar force (100 of the Derbyshire Regiment, 300 of the 13th Bengal Infantry and two guns) was left at Pedong, prepared to advance on Gantok if the Tibetans moved towards Tumlong, or to support the advanced column under Colonel Graham. A hundred and fifty of the Pioneers were left at Rongli to build a bridge over the Rongli chu; and 450 men (from both native regiments) were detailed to garrison Dolepchen, Rhenok and Pedong. A few days later two companies of the 13th Bengal Infantry, from the Gantok column, were moved to Pakyoung, on the route to Gantok or Intchi.

The advanced column reached Sedongchen on the 19th March, when Colonel Graham reconnoitred towards Jelaktso, and was fired on by a party of the enemy posted in a stockade at that place. On the following morning this stockade was stormed by detachments from the Derbyshire Regiment and the 32nd Pioneers, the Tibetans losing about 50 men in killed and wounded, that on our side being only one officer (Captain Lumsden) and four men of the 32nd Pioneers slightly wounded.

On the 21st Colonel Graham occupied Lingtu, the Tibetans, disheartened by the result of the affair at Jelaktso, having abandoned the position and retired beyond the Jalep Pass.

Further movements were impeded by a succession of snow-storms, but before the middle of April an advance was made to Gnathong, at which place a post (and eventually the head-quarters of the Sikkim Field Force) was established. The rest of the force was in detachments at Shalambi, Lingtu, Garnei, Jelaktso, Sedongchen, Lingtam, Rongli, Dolepchen, Rhenok and Pedong, posts on the line of communication with the base at Siliguri. Two companies of the 13th Bengal

Infantry continued posted at Pakyoung on the Gantok route.

During the rest of April and for the greater part of May movements were hampered by snow and rain; nevertheless frequent reconnaissances were made towards the Kupup and Pemberingo passes. About the middle of the latter month large numbers of the enemy collected in the Chambi Valley, and on the morning of the 22nd, about three thousand of them, under the command of Dnabu Depen, made a sudden attack on the post of Gnathong. Notwithstanding their numbers, they were never able to come within three hundred yards of the post, and after a three hours' contest they were completely repulsed, and fled precipitately through the Takola, Nimla and Pemberingo passes. The pursuit was kept up for some hours, and severe loss inflicted on the enemy. What their loss was precisely has not been ascertained, but probably not less than one hundred (including Depen Kúrsú, a prominent leader) were killed, and as many more wounded; fourteen prisoners were taken. The loss of the British force was three killed and eight wounded.

The conduct of Colonel Graham and the troops under his command was commended by the Government of India.

After the action of the 22nd May, little of importance occurred in Sikkim for a considerable time. On account of the uncertainty of communication during the rains and the difficulty that would be experienced in forwarding supplies, the European portion of the force (the mountain battery and the detachment of the Derbyshire Regiment) was withdrawn from Sikkim to Darjiling in June, but in order that the force left in Sikkim should not be altogether without artillery, two seven-pounder guns, to be manned by a detachment

of the 32nd Pioneers, were sent up from Fort William as post guns for Gnathong. By the end of June, with the exception of a detachment of forty men of the Derbyshire Regiment, the 32nd Pioneers and a wing of the 13th Bengal Infantry were the only troops left in Sikkim. During July the 32nd Pioneers were concentrated at Gnathong, the other posts being occupied by detachments of the 13th Bengal Infantry.

During the months of June and July the enemy were seen in varying numbers in the vicinity of the passes, which they employed themselves in blocking up with walls. Some trifling skirmishes occurred with our reconnoitring parties.

Towards the end of July, the enemy began once more to collect in large numbers. As Colonel Graham did not consider that the force then under his orders was sufficient to enable him to assume the offensive in the event of the enemy taking up a position in the Kupup Valley, he applied for reinforcements, and the European troops which had been withdrawn to Darjiling were directed to rejoin the Sikkim Field Force. Subsequently, as it was believed that the Tibetans would attack Gnathong in force before long, a further detachment of 200 men of the Derbyshire Regiment and the 2nd Battalion of the 1st Gúrkha Light Infantry (from Dharamsala) were added to the force, and the rest of the Derbyshire Regiment was moved up from the Presidency to Darjiling as a reserve. The last of the reinforcements reached Gnathong on the 25th August, on which date the force under Colonel Graham consisted of about 500 British and 1,800 Native troops, and being equivalent in strength to a brigade, the rank of brigadier-general was conferred on Colonel Graham.

Instructions were now given to Brigadier-General Graham that as soon as the cessation of the rains rendered military operations possible, he was to take measures to

drive the Tibetans out of Sikkim, to follow them up as far as prudence might seem to justify, and to inflict as severe punishment as possible, himself taking the initiative, unless the Tibetans attacked him in the meantime.

The threatened assault on the position at Gnathong did not take place, the Tibetans apparently awaiting the arrival of further reinforcements before delivering their attack. Several skirmishes took place in August and September, in which the enemy were the only sufferers.

About the middle of the latter month the attention of the Government of India was drawn, by the political authorities in Sikkim, to the mischievous activity of the Tibetan party at Gantok, where the Raja of Sikkim was residing, and permission was asked to march troops on that place from Pakyong in case of emergency. Permission was given accordingly, and Brigadier-General Graham was instructed to place himself in communication with the Lieutenant-Governor of Bengal, and to adopt such measures as the circumstances of the case might seem to demand. Soon after (on the 23rd September) Colonel Michell, 13th Bengal Infantry, moved up and occupied Gantok, when the Raja fled to Nathula with his Tibetan friends. The movement on Gantok was supported by the advance of a detachment of 100 men of the Derbyshire Regiment from Darjiling to Pedong.

In the meantime large numbers of the enemy (over 11,000) had collected and entrenched themselves at Takola, Nimla and other places in the vicinity of Gnathong. Brigadier-General Graham moved out against them on the morning of the 24th September, and in the course of the forenoon drove them from Takola and Nimla, pursued them to Jalep and captured their camp at that place, inflicting heavy loss upon them,—

about four hundred being killed, and a proportionate number wounded; more than a hundred prisoners were taken. On our side the loss was small, being only Lieutenant-Colonel Sir B. P. Bromhead, *Bart.*, and two men of the Pioneers, and Lieutenant A. C. B. Johnson and one man of the 1st Gúrkha Regiment wounded. The wound of Sir Benjamin Bromhead was a severe one, resulting in the loss of his right arm. On the 25th, Brigadier-General Graham advanced to Rinchagong in pursuit of the enemy; he encountered no opposition, the Tibetans, completely disorganized, flying partly to Phari and partly into Bhútán. On the 26th the pursuit was continued to Chambí, in Tibet, and a six-pounder brass field gun and some other small pieces of cannon were captured. The field force returned to Gnathong on the 28th September.

In a General Order publishing the official reports of these operations, the Viceroy expressed his approval of the excellent manner in which the command of the Sikkim Field Force had been exercised by Brigadier-General Graham throughout the campaign, especially in regard to the skill evinced by that officer in seizing the right moment for assuming the offensive, and the vigour and ability with which the attack was carried out, whereby the complete defeat and dispersion of the enemy was accomplished with very small loss to the British troops. The conduct of the officers and troops not only throughout the operations but during the whole period of the expedition, under circumstances of unusual climatic severity, merited, His Lordship said, high commendation.

Since the events above described, Colonel Michell has advanced with his detachment to Tumlong, and the Sikkim Raja has surrendered himself; the Rani has also returned to Sikkim. Communication has been opened with the Chinese envoy at Lhassa, who is now, it is hoped, on

his way to Chambi, and the withdrawal of the troops has been suspended pending his arrival. It is possible that a portion of the force may be retained in Sikkim during the winter.

Hazara Campaign, 1888.

On the 18th June 1888, Major Battye, 5th Gúrkha Regiment, accompanied by Captain Urmston, 6th Panjab Infantry, ascended the Barchar spur of the Black Mountain, Hazara, with a detachment of about 60 Gúrkhas and 20 police, his object being to reconnoitre the country and inspect the water-supply. Having pushed along the crest towards Chittabat, the party, though they remained strictly within the British frontier, were fired upon by some Gújars and Akazais. When retiring, covered by a small rear-guard, they were attacked by parties of the tribesmen, and the havildar of the guard was wounded; Major Battye, and Captain Urmston, who was unarmed, went to his assistance, but the main body, unaware of what had occurred, still continued to retire; the rear-guard was suddenly rushed by a band of the enemy, and in the affray that followed Major Battye, Captain Urmston and four of the Gúrkhas were killed.

On the commission of the outrage above described, reinforcements were at once sent into the Agror Valley; and, after consultation with the Panjab Government, the Government of India decided that a punitive expedition against the Black Mountain tribes, who had been guilty of frequent raids into British territory, was necessary; and the consent of the Secretary of State having been obtained, orders were issued for the formation of an expeditionary force, to be ready to move forward on the 1st October.

The force detailed for this purpose was composed of three batteries of mountain artillery, one company of sappers, four battalions of British infantry

and nine of native infantry, and was organized in two brigades, each sub-divided into two columns, as shown in

First Column.

Colonel J. M. Sym in command.

Troops ... { Part of a Mountain Battery.
2nd Battalion Northumberland Fusiliers.
3rd Sikh Infantry.
1-5th Gúrkha Regiment.
Half-company of sappers.

Second Column.

Colonel R. H. O'G. Haly in command.

Troops . { Part of a Mountain Battery.
1st Battalion Suffolk Regiment.
Wing 34th Bengal Infantry (Pioneers).
40th Bengal Infantry.
45th Bengal Infantry (Sikhs).

Third Column.

Lieutenant-Colonel M. S. J. Sunderland in command.

Troops .. { Part of a Mountain Battery.
2nd Battalion Royal Sussex Regiment.
14th Bengal Infantry (Sikhs).
24th Bengal Infantry.
Half-company of sappers.

Fourth Column.

Colonel A. C. W. Crookshank, C.B., in command.

Troops... { One British Mountain Battery.
2nd Battalion Royal Irish Regiment.
29th Bengal Infantry.
Wing 34th Bengal Infantry (Pioneers).
4th Panjab Infantry.

the margin. Brigadier-General J. W. McQueen, C.B., was nominated to the command of the expeditionary force, with the temporary rank of Major-General, the two brigades being placed under the command of Brigadier-Generals G. N. Channer, V.C., and W. Galbraith.

In addition to these troops, a reserve of one native cavalry regiment and one British and one native battalion of infantry was formed, and the troops at Nowshera were likewise held in readiness as a second reserve. A detachment of the Khaibar Rifles (about 350 men) was also detailed to join the force; and the Maharaja of Kashmir lent two of his Dogra battalions for the purposes of the expedition.

Orders were given for the head-quarters and the First, Second and Third Columns to concentrate at Oghi in the Agror Valley, and the Fourth Column at Derband on the Indus. The Reserve was to have concentrated at Abbottabad, but before the operations began, Major-General McQueen placed the chief portion at Oghi, and the remainder (a wing of the Seaforth Highlanders and a troop of the 15th Bengal Cavalry) with the Fourth (Derband) Column.

The strength of the force was about 2,700 British and 5,600 native troops, with eighteen guns. The first reserve, at Abbottabad, consisted of 1,800, and the second, at Nowshera, of about 2,500 men.

The general plan of operations was for three columns (the First, Second and Third) to operate directly from the Agror Valley, whilst the Fourth moved up the left bank of the Indus from Derband. The first object to be attained by the troops operating from the Agror Valley was the occupation of the Machai Peak, while the Fourth (or River) Column was to sever the connection between the Cis-Indus and the Trans-Indus clans, and, in co-operation with the other three columns, to dominate the country occupied by the hostile tribes.

Before the end of September the troops had all concentrated at the several points detailed for them.

The offending tribes having failed to make submission, a forward movement was ordered. The Fourth Column, under Brigadier-General Galbraith, was the first to move; it encamped at Chamb on the 2nd and 3rd October, and on the 4th advanced to Kotkai. At this place considerable opposition was encountered, and a smart action took place, the enemy losing about 200 killed, the loss on our side being 16 killed and wounded, including amongst the latter three officers,* one of whom (Captain Beley, Assistant Quartermaster-General) died the next morning. On the following day, Colonel Crookshank, while conducting a reconnaissance towards Kunhar, received a severe wound, from the effects of which he died at Haripur on the 24th October.

On the 4th the advance from the Oghi side took place, and Mana-ka-dana was occupied with slight opposition.

* Captain C. H. H. Beley, Assistant Quarter Master General, mortally (died next morning).

Captain O. C. Radford, 4th Panjab Infantry, severely.

Lieutenant F. J. S. Cleeve, Royal Artillery, dangerously.

On the 5th the crest of the Black Mountain, near Akhúnd Baba-ka-Chura, was reached; and on the 6th, Sambalbat was occupied.

The movements of the Hazara Field Force during the succeeding four weeks consisted of a series of marches and countermarches of detachments, during which almost every part of the Black Mountain was visited, and the enemy taught that no part of the country, however difficult, was inaccessible to British troops. In the course of these movements Seri, Khúnd, Bíran (the people of which had commenced the attack on Major Battye's party) Gangabatta, and many other strongholds of the various tribes were destroyed. A part of the Fourth Column also crossed the Indus and visited Palosi and Maidán, the settlements of the Hindústani fanatics who have so long been a source of trouble on the North-Western Frontier: the fort at Maidán was destroyed. Towards the end of October, Thakot, a remote Deshiwál village, was occupied, and the country of the Allaiwáls, who were contumacious, was also visited. The First and Second Columns advanced as far as Chali through the Ghoraphor Pass, where the enemy offered strong opposition: on this occasion Lieutenant Ewart, Seaforth Highlanders, was severely wounded, and several other casualties occurred. The Akazais, Hasanzais, Parári Saiyads and Tikariwáls having submitted, the troops were withdrawn from the Black Mountain early in November, and the Hazara Field Force was soon after broken up.

During the operations the following loss was sustained :—

	Europeans.		Natives.	
	Officers.	Men.	Officers.	Men.
Killed or died of wounds	... 2	4	2	18
Wounded	... 3	16	1	32
Total	... 5	20	3	50

In a farewell order issued by Major-General McQueen to the Hazara Field Force, on its dissolution, the results of the expedition were thus summarized :—

“ The Hasanzai, Akazai, Parari Saiyads and Tikariwals have tendered their submission in full, in accordance with the terms dictated to them by the British Government. The Machai Peak and Thakot, as well as Pokal, the principal village of the Allaiwals, have been visited by the force, and the construction of roads along the Indus Valley to the Chagarzai border and to Thakot from the Agror Valley, gives the power of rapid movement to troops in the future, which will go far towards maintaining the security of our frontier and our friendly relations with the Cis-Indus tribes.

“ The enemy against whom the force has had to contend have hitherto considered themselves secure from attack, owing to the mountainous and supposed inaccessible nature of their country ; but the Hazara Field Force of 1888 has proved to these tribes that their highest and most difficult passes, hitherto untrodden by the foot of European, can be traversed by any well-organised force.”

The General then went on to say :—

“ Much hard work has been entailed both in marching and road-making ; and the exposure at high elevations by Nos. 1, 2 and 3 Columns, and the heat experienced by the River Column, during a period of six weeks, without tents, have been most trying.

“ It is a source of great pleasure to the Major-General to be able to report for the information of General Sir F. S. Roberts, G.C.B., V.C., the cheerful manner in which all duties have been carried out, the exemplary conduct of the force, and the soldierly spirit which has animated all ranks on every occasion. The almost total absence of sickness amongst the troops, from first to last, showed that the fine condition of the men left nothing to be desired by any Commander.

“ In bidding the force farewell, Major-General McQueen heartily thanks all ranks for the very efficient help they have invariably rendered him during the operations which have now come to a close.”

Somali Coast.

The relations of the British Government with the tribes on the Somali Coast have been, generally, excellent ; but lately the Ayal Ahmad tribe have been troublesome, and it has been necessary to reinforce Berbera from Aden.

CHAPTER X.

THE DEFENCES OF THE EMPIRE AND MILITARY WORKS.

The permanent establishment of the Military Works Department has remained at the same strength and organized in the same manner throughout the period of Lord Dufferin's Viceroyalty. It consists of an Inspector-General of Military Works, six superintending engineers, 34 executive, and 34 assistant-engineers. The department has charge of the military buildings, roads and defences in the area garrisoned by the army of Bengal; also of the civil as well as military works, with some exceptions, in Baluchistan.

Strength and organization of the Military Works Department.

An important change in the status of the officers under the Inspector-General of Military Works was, however, effected early in 1885. Up to this time the Military Works Department had been a branch of the Public Works Department, and service in it was reckoned as service in a civil department. In January 1885, the Commander-in-Chief submitted a strong recommendation to the Government of India that service in the Military Works Department should be constituted military duty under the orders of the Commander-in-Chief, and should be considered the normal employment of Royal Engineer officers in India, as in all other parts of the world; the officers serving in it to have exactly the same status, privileges, and duties of their rank, as officers of other branches of the army. This recommendation was accepted by the Government of India, and the regulations were modified accordingly. In connection with this change, it was notified that the head-quarters of the corps of Royal Engineers in the Bengal Presidency would be with the Inspector-General of Military

Change in the status of officers.

Works, and that all Royal Engineer officers on arrival in India would be attached to the Military Works Department; also that the Inspector-General of Military Works was to be considered as on the staff of the army in respect to all business relating to the corps of Royal Engineers. Executive and assistant-engineers are liable to be directed by general officers to attend special parades on exceptional occasions, and to give such assistance as general officers may desire in the construction of field works and other military engineering operations. This change to a more military status of the officers of the Military Works Department has not affected the procedure in respect of departmental duties connected with the designing and execution of works, accounts, stock, stores, &c., which are still regulated by the Public Works Department Code.

Temporary increase of the military works establishment.

Owing to the great development of defence works, the strength of the Military Works establishment has been temporarily increased. At present there are 30 officers in excess of the sanctioned permanent scale, but this number has only very recently been reached. Of the additional officers now serving under the Inspector-General of Military Works, twelve belong permanently to the Public Works Department, and the rest are junior officers who have not yet been graded on any public works list.

Proposed abolition of the Military Works Department.

The Finance Committee recommended the abolition of the Military Works Department, and a reversion to the old system, under which all Imperial military works were under the charge of the various provincial public works departments; but this has not been accepted. In 1883 the Secretary of State sanctioned the formation of military works departments in Madras and Bombay. The Government of India, however, did

not consider the establishment of these separate provincial departments feasible, and up to the present time the extension of the Military Works Department to the whole of India has remained in abeyance, except that it has been found necessary to place the whole of the coast defences directly under the Inspector-General of Military Works. Special defence divisions have been formed under him at Bombay, Karachi, and Rangoon; the Aden Division, which has charge of all Imperial and provincial public works at that port, has also been placed under him, as the construction of the fortifications is by far the most important duty of the engineer establishment at Aden. Quite lately, it has been again recommended to the Secretary of State, in connection with the proposals, mentioned in Chapter II, for the abolition of the presidential army system, that the Military Works Department shall be extended to the whole of India.

The annual grant for ordinary military works in India and Lower Burma has been practically maintained at the amount fixed in 1880, *viz.*, Rx. 1,000,000. But this has been largely supplemented for military works in Upper Burma, and for coast and frontier defences. In the current year, the amount granted for ordinary military works has been reduced to Rx. 960,000; the provision for military works in Burma is Rx. 190,000, and the grant for special defences (including exchange) is Rx. 1,121,500.

*Remarks re-
garding ex-
penditure on
military
works.*

The most important measure of all the military works undertaken during the period the Marquess of Dufferin has been Viceroy and Governor-General of India, has been the creation and development of the defences of the empire against external attack by land or sea. The subject naturally divides itself under two main heads: (1) Coast Defences, and (2) Frontier Defences.

*Defence
works.*

*(1) Coast Defences.**Aden.*

At Aden the defence works at Steamer Point have progressed steadily, and could be completed in a short time, if information as to the mountings of the guns could be obtained in sufficient detail to allow the emplacements to be finished.

*Proposals
for the defence
of Indian
harbours.*

But except at Aden, where after years of waiting, a beginning had been made in the autumn of 1884, the construction of suitable defences for the ports of India was practically in abeyance for some years, little having been done at Bombay, Calcutta, Karachi, Rangoon, Madras, or any of the minor ports. On the 25th October 1884 the Defence Committee submitted to the Government of India revised proposals for the defence of Indian harbours, urging in the strongest terms the expediency of the prompt provision of adequate defences for the principal ports. The memorandum dealt only with Bombay, Karachi, Calcutta, Rangoon, and Madras; and the cost of fortifying these places, including guns and all floating and sub-marine mining defences, was estimated at £450,000.

These revised proposals were considered by the Government of India in December 1884. They were submitted to Lord Dufferin in January 1885, by the Hon'ble General Wilson, the Military Member of Council, with his strong support, and, after consideration in Council, were accepted and earnestly recommended to the Secretary of State in despatch No. 52 of the 21st March 1885. In relative importance, however, Bombay and Karachi were placed first, and His Lordship was asked to order the guns, gun-boats, and torpedo-boats for these places at once; the early provision of the torpedo-boats for Calcutta and Rangoon was also stated to be necessary; but it was said that at Madras it was not intended to incur any immediate

expenditure. It was further suggested that the needful action should be taken for the supply of floating defences at Aden, in such manner as the responsible advisers of Her Majesty's Government on these matters might deem most suitable.

The Secretary of State replied by telegraph on the 28th April 1885, stating that steps would be taken to procure torpedo-boats and armaments; and meanwhile he sanctioned the provision of funds, and authorized the immediate undertaking of all needful works. Whereupon the Government of Bombay was requested to submit their proposals for carrying out the measures recommended by the Defence Committee, as early as possible.

*Armaments,
&c., for coast
defences.*

In a telegram to the Secretary of State, dated the 4th May 1885, fifty-five 6-pounder quick-firing guns and fifty-five one-inch four-barrelled Nordenfeldts were asked for; and in despatch No. 72 of the 11th May 1885, the Secretary of State was asked to add three long-range guns to those already ordered for the defences of Karachi.

In the cold weather of 1885-86, Aden, Bombay, Karachi, Calcutta, and Rangoon were visited by Lieutenant-Colonel Ellis, R.A., and Lieutenant-Colonel Barker, R.E., two experts who had been commissioned to report upon and advise concerning colonial defences. Later in the same year, their reports, with all other available information regarding these ports, were considered by a Committee held at the War Office under the presidency of Colonel Sanford, C.B., R.E., the Inspector-General of Military Works, then on leave. A report on each place was drawn up by this committee, and forwarded by the Secretary of State with remarks for the information of the Government of India.

*Reports re-
garding
coast ports.*

The various reports and information obtained have been carefully considered by the Defence Committee under the presidency of the Commander-in-Chief in India; and, notwithstanding considerable difficulties in connection with some points, definite schemes of defence have been elaborated and sanctioned for Bombay, Karachi, Calcutta, and Rangoon, and work is in active progress at all four ports, and could probably be completed within a comparatively short time if the guns and their mountings were supplied at an early date; the works at Bombay and Karachi, as well as those at Aden, will be complete in all essentials necessary to enable the guns to be fought, before the next rainy season, unless the works are delayed by the non-arrival of the racers and mountings of the guns.

The Secretary of State has said (despatch No. 223, dated the 27th September 1888) that fourteen ten-inch racers for the coast defences of India, Bombay, Karachi and Rangoon, have been ordered, but no date can yet be given for their delivery. Four ten-inch racers for Aden are promised about the end of October, and a fifth later on. Some six-inch guns have arrived, and as the ten-inch gun has, it is reported, now passed proof, it is hoped that all the guns required will be supplied within a short time.

*Schemes for
coast
defences.*

The schemes sanctioned for the defences of Bombay, Karachi, Calcutta and Rangoon, are as follow :—

Bombay.

The scheme for the permanent defences of Bombay comprises six principal batteries, *viz.*, three on the mainland, at Mahaluxmi, Malabar Point and Colaba Point; and three on the islands in the harbour, *i.e.*, on Oyster Rock, Middle Ground and Cross Island; these are to be supplemented by high-angle fire from batterie of nine-inch guns.

The armaments sanctioned for these batteries are shown in the following table:—

Name of Battery.			10-in. B. L.	38-ton R. M. L.	10-in. R. M. L.	6-in. B. L.	6-pr. quick-firing.	Rifle calibre machine-guns.
Mahaluxmi	...	...	1	...	2	2	...	2
Malabar Point	...	...	1	...	2	2	...	2
Colaba Point	...	...	2	...	2	2	...	2
Oyster Rock	...	...	2	...	...	3	2	2
Middle Ground	...	...	2	...	...	2	2	2
Cross Island	...	...	...	2	...	2	2	2
Total	...	...	8	2	6	13	6	12

Designs and estimates have been approved and sanctioned for five batteries, *viz.*, Mahaluxmi, Malabar Point, Colaba Point, Oyster Rock, and Middle Ground. The project for the battery at Cross Island has been sanctioned; this battery, however, is at present complete in itself, and is of considerable power.

The active defence of Bombay is provided for by the following vessels:—

- (1) Two turret-ships, to be re-armed with eight-inch breech-loading guns.
- (2) Two gun-boats.
- (3) Three torpedo-boats, first-class, beside two guard-boats.

The defences within the harbour will be supplemented by a system of sub-marine mines. The areas occupied by the mines under the scheme at present in force will, on the completion of the coast batteries, and the provision of the permanent naval force, be somewhat reduced. The works are well advanced.

The defences of Karachi consist of three batteries, *Karachi*, distinguished as No. 1, No. 2, and No. 3, respectively; with a subsidiary battery attached to No. 1 for the protection of the mine-field. No. 1 has been located

on the Manora headland, and Nos. 2 and 3 on the west beach facing the sea. The armaments sanctioned for these batteries are as follow :—

Name of battery.	10" R. B. L. guns on hydro-pneumatic disapparing carriages.	9" R. M. L. guns <i>en barbette</i> on C. pivots.	9" R. M. L. guns on A. pivot.	6" R. B. L. guns on hydro-pneumatic disapparing carriages.	40-pr. R. M. L. guns on travelling carriages.	6-pr. or 3-pr. quick-firing guns.	Rifle-calibre machine-guns.
No. 1 (Manora Point) .	2	2	...	2	...	3	2
Subsidiary (for mine-field).	...	...	...	...	3	2	2
No. 2 ...	...	...	2	...	2	2	2
No. 3 ...	1	2	...	2	...	2	2
Total ...	3	4	2	4	5	9	8

The batteries are supplemented by a system of submarine mines.

Detailed designs and estimates have been sanctioned for all three batteries. As regards No. 2 Battery, it has been decided, in the first instance, to improve the existing battery, and later on to re-distribute the guns and mount them for both high-angle and direct fire, and on "C" instead of "A" pivot platforms.

The provision of a new light-house at Manora, at an estimated cost of Rx. 13,472, has also been sanctioned. The existing light house stands on a part of the site of No. 1 Battery, and must be removed. The new building is in course of construction.

The active defence of Karachi is provided for by two first-class torpedo-boats and one guard-boat.

The sanctioned scheme for sub-marine mining defence is restricted to measures for securing the harbour entrance and its immediate approaches ; but a few scattered mines along the sea-ward front of the main position

having been considered useful, provision has been made for laying them also.

It has been decided that defence works for the *Calcutta*. protection of Calcutta against attack by a naval power are to be constructed on the Hugly. The defences are to consist, in addition to Fort William, which has been already re-armed, of a first line of defence at Chingri Khal, near Diamond Harbour, and a second at Fultah, about eleven miles higher up the river. At Chingri Khal, there will be an enclosed redoubt mounting seven heavy and medium armour-piercing guns, and the necessary subsidiary armament to repel any attempt to take the work by landing-parties. At Fultah the defences are to be in two parts,—one work at Fultah Point, and the other at Fultah, about 3,000 yards higher up the river.

The armaments sanctioned for the three batteries are—

Battery.		38-ton R. M. L. guns.	9-in. R. M. L. guns.	6-in B. L. guns.	40 pr. R. M. L. guns.	Quick-firing guns.	Rifled calib re machine-guns.
Chingri Khal	...	3	...	4	2	3	3
Fultah	...	...	2	2	...	4	2
Fultah Point	...	2	.	2	...	3	2
Total	...	5	2	8	2	10	7

An estimate amounting to Rx. 28,500 has been sanctioned for the works required in connection with the battery at Fultah. Some of the works have been finished, while others are well advanced. Designs for remodelling this battery to receive its eventual armament are in hand; and those for the battery at Chingri Khal have been completed and approved. The project for the Fultah Point battery has not yet been prepared.

One first class torpedo-boat has been sanctioned for the active defence of the Húghly, besides two guard-boats. Sanction has also been given to a system of submarine mines at two points on the river. The detailed drawings and estimates for the buildings and works needed for these defences have been sanctioned, and the works have for the most part been completed.

A scheme for improving the landward communications of the Fultah battery has been prepared, and is under consideration.

Rangoon.

The scheme originally sanctioned for the defence of Rangoon consisted of two principal batteries situated respectively at Monkey Point and King's Point, and an advanced battery of medium and light guns covering the mine-field at Chokey Point, together with three detached blindages for quick-firing and machine guns, one in conjunction with each battery. These defences were to be supplemented by two lines of sub-marine mines.

The armament of the batteries and blindages were to be as shown in the following tabulated statements:—

Provisional.

Name of Battery.	9" R. M. L. guns	30-pr. R. M. L. guns.	41-pr. or 25-pr R. M. L. guns.	6-pr. quick-firing guns.	8-pr. quick-firing guns.	Rifle-calibre machine guns
Chokey Point ..	..	3	2	..	..	..
Chokey Point detached blindage ..	..	..	..	3	..	4
Monkey Point ..	3	..	4	..	..	..
Monkey Point detached blindage ..	..	..	..	2	..	2
King's Point ..	2	..	2	..	..	..
King's Point detached blindage ..	..	..	..	..	2	2
Total ..	5	3	8	5	2	6

Eventual.

Name of Battery.		10" R. B. L. guns.	80-pr. R. M. L. guns.	6" R. B. L. guns.	40-pr. or 25-pr. R. M. L. guns.	6-pr. quick-firing guns.	3-pr. quick-firing guns.	Rifle-calibre machine guns.
Chokey Point	..	...	3	...	2	...	...	...
Chokey Point	detached	...	...	...	...	...	...	...
blindage ..	..	...	...	...	...	3	...	4
Monkey Point	..	2	...	2	...	...	...	...
Monkey Point	detached	...	...	...	...	...	...	...
blindage ...	...	...	...	...	...	2	...	2
King's Point	..	1	...	2	...	...	...	...
King's Point	detached	...	...	...	...	...	...	...
blindage ...	...	..	...	...	...	...	2	2
Total	...	3	3	4	2	5	2	8

Further consideration of the defensive requirements of Rangoon has, however, led to the original scheme being somewhat modified. Owing to serious apprehension entertained by the responsible engineer officers of the effect of re-modelling the Monkey Point battery, which has been practically completed, to receive the eventual armament, it has been decided to leave it as it is with an armament of three nine-inch rifled muzzle-loading guns, the carriages being modified to admit of high-angle as well as direct fire, and the guns being polygrooved; and, instead of a battery at King's Point, it has been decided to construct one at Siriam Point, which is now considered the better position of the two. The armament of this battery is to consist of two ten-inch and two six-inch breech-loading guns. The plans and estimates for this battery have been sanctioned.

The project for re-modelling and completing the Chokey Point battery has been sanctioned. For the active defence of this port, one first-class torpedo-boat and two guard-boats have been sanctioned.

Madras. The final recommendations of the Defence Committee for the defence of Madras have been submitted, and are under consideration.

Minor ports. Projects for the works necessary for the defence of Moulmein and Port Blair have also been submitted, and plans for the defence of Bassein, Akyab and Chittagong are being investigated.

Schemes for active defence of ports. Schemes for the active defence of the ports of Calcutta, Madras, Rangoon, Moulmein, Bombay and Aden have been drawn up, and provisionally approved by the Government of India. When these have been completed, each port will possess a pre-arranged plan of defence, utilizing all the existing military, marine and civil resources, and combining all the protective elements for its security. Orders have been issued to proceed with the working out of all details.

(2) *Frontier Defences.*

On the 15th June 1885 the Defence Committee submitted an important memorandum on the defence of the North-West Frontier, dealing with communications and fortifications.

Communications. A scheme for road and railway construction, of which the primary object was to meet military requirements in connection with the defence of the North-West Frontier, had been sanctioned by the Secretary of State in despatch No. 148,—Railway,—dated the 27th November 1884. The works sanctioned were—

(1) The completion of the Sind-Peshin Railway.

The sanction given provided for extensions from Quetta to the head of the Bolan Pass, 25 miles, and from Shebo to the foot of the Amran Range, as also for the storage of a sufficiency of permanent-way materials on the near side of the Amran Range to

admit of the extension of the railway to Kandahar should circumstances render such an operation desirable ;

- (2) The construction of a broad-gauge line from Lala Músa, on the Punjab Northern Railway, to Sher Shah, opposite Múltan, with a branch to the Indus, opposite Dera Ghazi Khan, and ferries over the Indus and Chenab ;
- (3) The bridging of the Sutlej at Ferozepore. This bridge to be for a broad-gauge line ;
- (4) The construction of a road from Dera Ghazi Khan to Peshin to cover the Sind-Peshin Railway ;
- (5) The construction of a road on the right bank of the Indus from Dera Ismail Khan to Kushalgarh, *viá* Bannu and Kohat ;

the cost being estimated at six and a half millions sterling.

The Defence Committee advocated certain extensions and modifications of this scheme. As regards railways their recommendations were as follow :—

- (a) The immediate construction, in extension of the Peshin Railway, of a tunnel through the Amran Range, provided that an alternative surface line which would turn the range further south could not be found ;
- (b) The conversion of the temporary Bolan line then under construction, into a permanent one ;
- (c) The provision of additional crossing stations on the line between Jacobabad and Sibi ;
- (d) The Sind-Sagar Railway to be aligned to strike the Indus at Mianwali opposite Bannu ; or if that were not advisable for constructive reasons, that a branch to Mianwali should be provided ;

- (e) The extension of the railway from Fazilka to Bahawalpur;
- (f) The extension of the Panjab Northern State Railway to Landi Kotal, and the maturing of a scheme for its continuation to Kabul.

The Defence Committee recommended no new roads, but drew attention to the importance of the road to Kashmir, which had been commenced, and recommended that it should be completed as a good cart road without delay, and that it should be extended through Astor to Gilgit and Chitral, as a cart road as far as practicable, and beyond, as a mule road.

The Committee also urged as of pressing importance the survey of the Gomal Pass, and the exploration of the alternative routes converging on it from Peshin *via* Zhob, and from the country between Kelat-i-Ghilzai and Ghazni.

Fortifications.

The works advocated by the Committee were—

- (a) An extensive entrenched position closing the *debouché* of the Khaibar Pass.
- (b) A strong enclosed work at Landi Kotal.
- (c) The improvement of, and additions to the existing defences at Kohat, and the provision of a suitable armament.
- (d) A small but strong and well armed redoubt at Bannu.
- (e) A similar work at the Gomal Pass.
- (f) A large entrenched position in Peshin, with probably one or more strong and well armed redoubts near Gulistan and Kila Abdulla, and detached posts, in the form of block-houses or small forts, on the Khwaja Amran range, and possibly another strong redoubt on the extreme left of the position.

- (g) At Quetta, the upper plateau of the Miri to be retrenched and suitably armed, and the lower defences put into thorough order, and rendered capable of enclosing and protecting a second-class arsenal, to be established at this station.
- (h) At Sakkar, a strong entrenched position covering the bridge and securing it from injury by hostile artillery at long range.
- (i) At Bahawalpur the bridge to be protected in any case by block-houses; and if the railway was continued from Fazilka to Bahawalpur, an extensive entrenched camp to be constructed.
- (j) A strong entrenched position at Miltan.
- (k) The provision of suitable armaments for the fortifications.

After careful consideration, the recommendations contained in this memorandum were in the main adopted by the Government of India, and recommended to the Secretary of State in despatch No. 112 of the 10th July 1885.

As regards the railways advocated by the Defence Committee, the Government of India recommended the proposed extension of the Sind-Peshin Railway through or round the Amran Range; the conversion of the temporary Bolan line into a permanent line, which, however, it was pointed out, would be tantamount to the construction of an entirely new line; and the construction of a branch line to Mianwali. As regards the provision of additional crossing stations between Jacobabad and Sibi the Secretary of State was informed that they were being put in hand. The advisability of the Fazilka-Bahawalpur line was considered doubtful, and a further communication on this point was promised. The proposal to carry the railway to Landi Kotal was one which it was considered impossible to deal with at that time.

Several other railway works not mentioned by the Defence Committee were brought forward as immediately desirable :—

- (a) A cross-line to connect the Rajputana system of railways with the Indus Valley system.
- (b) The improvement of the very steep gradients on the Panjab Northern State Railway between Jhelum and Rawal Pindi.
- (c) The extension of the railway to the proposed entrenched position at the mouth of the Khaibar.

The recommendations of the Defence Committee relating to the road from Rawal Pindi to Srinagar, and onwards to Gilgit and Chitral, were strongly supported. The Secretary of State was also informed that arrangements were being made for the immediate prosecution of the Dera Ghazi Khan-Peshin road, and that the improvement of the road from Kushalgarh (through Kohat and Bannu) to Dera Ghazi Khan would be undertaken.

*Defences of
Peshawar
and other
frontier
stations.*

The proposals of the Defence Committee for defences at Peshawar, Kohat, Bannu, the Gomal, in Peshin, at Sakkar, and at Múltan, were recommended to the Secretary of State. The provision of a second class arsenal at Quetta, and the supply of breech-loading ordnance, were also urged. With regard to the fort at Landi Kotal the Government of India stated that they were not in a position to say whether the project would be practicable, and as regards Bahawalpur, they were not prepared to make any proposals for defences beyond the provision of block-houses to protect the bridge. The estimated cost of the whole of the frontier defence works was stated to be, in round numbers, one million and a half sterling, exclusive of the cost of armaments.

This scheme of defensive measures was practically sanctioned by the Secretary of State, as a whole, in his

despatch No 271, dated the 15th October 1885. The only points on which modifications were suggested or ordered were (a) the extension of the Kashmir road to Gilgit and Chitral, of the advantage of which he was doubtful; (b) the position of the entrenched camp which the Indian authorities had proposed to construct near Peshawar, but which was ordered to be at Campbellpore; (c) the re shaping of the arrangements connected with the Kohat Pass, a point which had not been considered by the Government of India. Lord Randolph Churchill considered that the defensive works of most pressing importance were those in the Peshin Valley, and at Sakkar and Múltan.

On the receipt of the Secretary of State's sanction active measures were at once taken to carry out the various works. The construction of the Sind-Sagar Railway with its branch to Mianwali was steadily prosecuted; also the Dera Ghazi Khan-Peshin road; and both are now complete. The requisite crossing stations were put in between Jacobabad and Sibi. The necessary investigations regarding the conversion of the Bolan Railway into a permanent line, the location of a cross-line to connect the Rajputana and Indus Valley systems, the improvement of the steep gradients on the Panjab Northern State Railway between Jhelum and Rawal Pindi, and the extension of the railway to Jamrúd, were set on foot. Sir Charles MacGregor, the Quartermaster General in India, with a suitable staff, was deputed to examine the defensive position in Peshin. Sir Frederick Roberts also, after taking up the command of the army in India in November 1885, devoted a large part of the cold weather to the examination of the frontier.

*Measures
taken to
carry out
the various
works.*

In July 1886, a note on the defence of the North-Western Frontier by Sir Frederick Roberts, in his capacity as President of the Defence Committee, was laid before

*Defences of
the North-
Western
Frontier.*

the Government, and was referred for consideration to a conference of which the members were the Hon'ble Sir C. U. Aitchison, Lieutenant-Governor of the Punjab; His Excellency Sir F. Roberts, Commander-in-Chief in India; the Honorable Sir T. Hope, Member of Council for Public Works; and the Honorable Major-General G. Chesney, Military Member of Council. They reviewed the whole subject, and formulated their conclusions on each part of the general scheme. These conclusions were accepted by the Government of India, and a despatch No. 156, dated the 4th October 1886, was sent to the Secretary of State, recapitulating the sub-heads of the general defensive scheme, indicating the conclusions arrived at and the action taken or contemplated, and finally adverting to the points still calling for decision. The contents of this despatch were briefly as follows:—

- (i) It was stated that the new roads and railways sanctioned by the Secretary of State in 1884 were in active progress, and that there was every reason to anticipate their completion within the period originally calculated.
- (ii) *Extension of the Sind-Peshin Railway.* The question of the best line was still undecided. An alignment in the direction of Nushki had been reconnoitred to a certain extent, but a more complete survey might be needed. Projects for crossing the range *viâ* the Gwaja Pass, and one for piercing it *viâ* the Sanjal, had been prepared; and another for piercing it *viâ* the Khojak Pass was under preparation. The result of the further enquiries would be submitted as soon as possible.
- (iii) *Bolan Railway.*—The project for a permanent Bolan Railway would soon be ready for consideration.

- (iv) *Dera Ghazi Khan-Peshin Road.* The work was being carried out.
- (v) *Sind-Sagar Railway.*—This was being rapidly constructed.
- (vi) *Roads into and beyond Kashmir, (a).*—The Rawal Pindi-Srinagar road was under construction. (b) The previous recommendations regarding the road to Gilgit and Chitral to be adhered to.
- (vii) *Improvement of the gradients on the North-Western Railway.*—An estimate was under preparation ; but it was thought that only the gradients rising towards the frontier called urgently for improvement.
- (viii) *Bridging the Chenab at Sher Shah.*—This was not to be lost sight of.

Defences.

- (i) *Entrenched position near Peshawar, and improvement of Fort Jamrud.*—The Government of India accepted the view that this position should be defended with the aid only of works improvised and armed when the necessity arose ; except that the existing fort should be at once enlarged, strengthened and properly armed, and a sufficient water-supply secured.
- (ii) *Defensible posts at Landi Kotal and China in the Bazar Valley, and their connection by road with Peshawar.*—It was considered that an enclosed *serai** should be built at Landi-Kotal, and the road from that place to Peshawar be kept in thorough order. The advance

* *Serai* (properly *sarai*),—an enclosure for travellers.

to China was considered inadmissible for the present.

- (iii) *Defensive position at Attock.*—Here, it was said, no immediate expenditure should be incurred but a scheme should be prepared for holding the position in force. An essential part of this position is a branch road from Gumbat through Nilab Gasha to Khairabad.
- (iv) *Road through the Kohat Pass.*—The Government of India were of opinion that, on the whole, it would be best to maintain existing arrangements.
- (v) *Works at Campbellpore.*—These were considered unnecessary.
- (vi) *Arsenal at Rawal Pindi.*—Some extension was held to be necessitated by the development of defensive measures on the frontier.
- (vii) *Outpost towards the Kuram Valley.* It was considered desirable to have a small fort as an outpost in the direction of Thal ; and Togh was suggested as the most suitable site.
- (viii) *Kohat.*—Nothing was thought necessary, beyond the improvement of the existing fort.
- (ix) *Bannu.*—The great importance of this position was adverted to ; but it was considered that the present fort would suffice if strengthened and properly armed. It was also proposed to construct a branch road from Laki to the Indus, opposite Mianwali. The desirability of eventually constructing a railway to Bannu was also mentioned.
- (x) *Gomal Pass.*—The Government of India proposed to defer any action here.
- (xi) *Entrenched position in Peshin.*—It was reported that nothing had been done ; but that a

further examination was being made, and steps being taken to admit of the works being commenced at once when the site was fixed.

- (xii) *Roads connected with the defensive position in Peshin.*—Good direct and lateral communications were declared to be essential in Peshin, and it was stated that estimates for certain roads were to be immediately prepared.
- (xiii) *Sakkar.*—the Government of India stated that they intended to arrange for the early commencement of the requisite works for covering this crossing of the Indus. The formation of ordnance and commissariat depôts on the island of Bakkar was also recommended.
- (xiv) *Bahawalpur Railway Bridge.*—It was said that the block-houses for the protection of this bridge would be begun very shortly.
- (xv) *Múltan.*—With regard to this position the Government of India stated that they were disposed to regard the execution of the defences of Múltan as secondary in point of time to the other works proposed.

Including armaments the total cost of the frontier defences was estimated at £ 1,060,000.

The Secretary of State replied in his despatch No. 24 of the 27th January 1887. He approved the revised scheme in its entirety, but wished the Gomal works and the defences of Múltan to be undertaken without delay.

This sanctioned scheme has been steadily prosecuted, and the present condition of the works is as follows:—

Communications.

- (i) (a) The Sind-Peshin Railway has been extended to the foot of the Khojak Pass; and the

Present condition of the frontier defensive works.

Sind-Peshin Railway.

permanent-way for the extension of the line to Kandahar has been conveyed to Gulistan Junction. Arrangements for its onward conveyance to Chaman, on the western side of the Amran range, are in progress.

*Sutlej bridge
at Ferozepore.*

(b) The bridge over the Sutlej at Ferozepore has been opened for traffic for more than a year.

*Dera Ismail
Khan-Ku-
shalgarh
road.*

(c) The road from Dera Ismail Khan to Kushalgarh, *viâ* Bannu and Kohat, is practically finished.

*Railway
through the
Amran
Range.*

(ii) It has been decided to carry the railway through the Amran range at the Khojak Pass. This involves a tunnel about two miles long under the crest of the range. Work on this tunnel is in active progress; the approaches to it on both sides are well advanced.

*Bolan rail-
way from
Hirok
downwards.*

(iii) The Bolan line from Hirok downwards has not been altered, but a broad gauge line has been constructed from Hirok to Darwaza over the top of the pass, and communication without break of gauge has been thus established from Sibi to Quetta, through the Bolan Pass.

*Dera Ghazi
Khan-Peshin
road.*

(iv) The Dera Ghazi Khan-Peshin road is practically complete.

*Sind-Sagar
Railway.*

(v) The Sind-Sagar railway from Lala Mûsa to Sher Shah with branches to the Indus at Mianwali and opposite Dera Ismail Khan is completed.

*The Kashmir
road.*

(vi) The section of the road to Kashmir lying within British territory is complete; the remainder is well advanced.

*Jhelum-
Pindi section,
North-
Western
Railway.*

(vii) Some of the improvements of the gradients on the Jhelum-Pindi section of the North-Western Railway have been carried out; the estimate for the whole is ready.

- (viii) The project for bridging the Chenab at Sher Shah has been sanctioned, and the work is in hand. *Bridge over Chenab at Sher Shah.*

Defences.

- (i) The general scheme of defence for Peshawar and Jamrúd has been sanctioned, and directions given to the Inspector-General of Military Works for the preparation of the detailed designs of the works. The defensive line immediately covering Peshawar will extend from the Bara Fort on the left to near Palosi on the right. On this line the natural advantages of the position, with its strong mud-built villages, will be developed by the construction of closed infantry redoubts and emplacements for field and siege guns, these being erected only when danger is apprehended. At Jamrúd the measures for strengthening the fort will include advanced redoubts of field-work type, also to be thrown up only in time of danger. A scheme for the water-supply of the fort has been drawn up and is under consideration. *Peshawar and Jamrúd.*
- (ii) The construction of a defensible *serai* at Landi Kotal is in progress, and measures have been taken to keep the road through the Khaibar connecting it with Jamrúd in good order. An alternative line through the Mullagori country, to the north of the Khaibar is being examined. The project for a work at China is in abeyance. *Landi Kotal.*
- (iii) The scheme of defence for Attock has been settled. A detailed estimate for the mule roads up to the Raja Hodi heights has been *Attock.*

sanctioned and work is in hand. The remaining detailed projects are under preparation.

- Kohat Pass.* (iv) It is considered undesirable to disturb the existing arrangements relating to the Kohat Pass.
- Campbellpore.* (v) No works are now considered necessary at Campbellpore.
- Rawal Pindi Arsenal.* (vi) The works for increasing the accommodation in the arsenal at Rawal Pindi to the needful extent are in progress.
- Defence of the Kohat-Thal road.* (vii) The recommendations of the Commander-in-Chief for the site and character of the work to be constructed on the Kohat-Thal road, as an outpost in the direction of the Kuram, have just been received and are under consideration.
- Kohat and Bannu.* (viii) and (ix) The improvement of the forts at Kohat and Bannu has not yet been carried out.
- Gomal Pass.* (x) An attempt was made to explore the Gomal Pass under tribal escort in the early part of 1888, but was frustrated by the misconduct of the Mahsúd Waziris. A further communication from the Quartermaster-General has just been received on this subject and is under consideration. Meanwhile, the fort which it has been decided to construct in order to dominate this pass has not been commenced.
- Peshin.* (xi) and (xii) The defences and communications in Peshin are approaching completion. An account of these in some detail is given hereafter.
- Sakkar.* (xiii) The general plan of defence at Sakkar has been decided on, and the detailed project for

the outlying works is nearly completed. The block-houses at the bridge-abutments are finished.

- (xiv) The block-houses on the abutments of the *Bahawalpur* bridge at Bahawalpur are being commenced, the detailed estimate having been sanctioned.
- (xv) The question of the defensive measures to be *Multan* undertaken in connection with the Multan position has been the subject of prolonged and careful consideration. The conclusions finally adopted by the Government of India and placed before the Secretary of State in despatch No. 163 of the 7th September 1888, are as follow :
 - (a) The position of the railway bridge over the *Defences of Ramuwalla* Chenab at Ramuwalla should be fortified by the erection of block-houses for the immediate defence of the bridge structure, and by the construction of a strong bridge-head on the right bank of the river, consisting of redoubts and batteries of field-work type, armed with heavy field and siege guns, and supported from the left bank by two or more batteries armed with long-range siege guns ;
 - (b) A place of arms, consisting of three new powerfully armed permanent redoubts, should be constructed at Multan, and the old fort improved and strengthened, or some modification of this plan should be adopted, the permanent works being arranged and constructed in such a way that they can be added to, so that the position would form a formidable fortress, and be capable of containing a considerable body of troops and a large dépôt of

stores. The projects are under preparation by the Inspector-General of Military Works.

Rawal Pindi. The defences of Rawal Pindi have also recently been under consideration with the result that it has been held necessary to construct a strong fortified position at this place, of a similar type to that proposed for Multan. The Defence Committee have been asked to report on the general arrangement and nature of the works necessary.

*Defences and
communications
in
Peshawar.*

Reverting to the subject of the defences and communications in Peshawar referred to in (xi) and (xii) on pages 226-7 and 230, which have occupied a first place in the attention of the Government,—the following paragraphs give an outline of what has been accomplished.

The further investigation of the problem of the defence of the position in front of Quetta led to a considerable modification of the original proposals. Instead of an entrenched camp at Saiyad Hamid, it has been decided to construct only a bridge-head at that position to cover the passage of the Lora and safeguard the railway bridge, and to withdraw the main defensive line nearer to Quetta, and take advantage of the great barrier of the inaccessible Takatu range.

The works at Saiyad Hamid will consist of detached works in advance of the bridge, with block-houses at the ends of the bridge itself; the projects for these are under preparation.

The works designed to bar the immediate approach to the Quetta Valley consist of a line of infantry redoubts and batteries extending across the Bostan Valley, from the extremity of the south-western spur of the Takatu range to the Mashelak range at a point about one mile south of the Ghazaband Pass. To close the Ghazaband Pass, a redoubt armed with field guns, has been constructed at its western mouth, and the hills bordering on

the pass have been prepared for occupation, and emplacements constructed for guns at suitable points.

A gap which separates the extreme south-western spur of the Takatu Range from the main mass of the range, and known as the Múrgli Pass, has been carefully prepared for defence by the construction of roads and gun-emplacements, and of a retired line consisting of a central redoubt with an infantry parapet extending on each side of it to the precipitous hills on the flanks. The defences here have been specially arranged with a view to a counter-stroke being made from this pass, in the event of an attack on the main line.

At Gúrkhai, where the Sind-Peshin Railway debouches at the northern end of the Takatu range into the Gwal Valley, the position is naturally a very strong one, and it has not been considered advisable to construct any defensive works beyond certain roads which are necessary to allow of the position being readily occupied and held. The whole position here, including the rear of the position as far back as Kach, has been very carefully examined and the system of defence decided on.

All the works and the communications of these defences connected with the Takatu position are approaching completion.

The line for a road along the rear of the crest of the Amran range has been laid out, but no work has yet been begun. The defences to safeguard the tunnel at the Khojak Pass are under consideration.

At Quetta itself the fort has been completely remodelled. On the top of the old Miri a strong redoubt has been constructed. The lower defences of the fort have been extended, and the profile adapted to modern requirements of defence. Within the lower enclosure, buildings for a second-class arsenal are being rapidly

pushed on. A line of railway into the fort is also being laid.

The communications in Peshin which have been sanctioned for immediate construction are the following :—

1. From Quetta through Baleli, Saiyad Hamid, and Kila Abdulla to Chaman.
2. From Quetta through Ispangli to Ghazaband.
3. From Saiyad Hamid to Gulistan.
4. From Gulistan to Killa Abdulla.
5. From Killa Abdulla by Masezai, Peshin and Gúrkhai to Kach.
6. From Quetta to Kach east of the Takatu range.
7. From Peshin to Saranum.
8. From Peshin to Saiyad Yaru.
9. Khwaja Amran crest road.

The detailed estimates amount to Rx. 200,000. All these roads except the last are metalled and well advanced towards completion.

Interior Defences of the Empire.

The provision of fortified posts, and the construction of works to guard important bridges and important strategical points throughout the country, though secondary in importance to the protection of the coast and the north-west frontier, have not been lost sight of.

Lucknow.

At Lucknow the plan of defence has been modified on further consideration. Instead of the right British infantry lines being constituted the fortified post, the railway station will be the centre of the defended area. Two strong redoubts known as Nos. I and III command the approaches to the railway station and cantonment from the direction of the city. Of these, No. I to the east of the station is complete; some work has also been done on No. III, but the detailed estimate is not yet sanctioned.

Clear esplanades of 500 yards radius have been acquired for these redoubts. The defence towards the south-west and south will be provided for by converting certain store buildings and workshops into defensible posts; the plans for this are under preparation. Satisfactory arrangements have also been concluded between the military and railway authorities regarding the limits of the extension of the railway buildings. There is every prospect of the defences of Lucknow being now brought to completion without further check.

The defences of the fort at Fatehgarh in the North-^{Fatehgarh.} West Provinces, which contains the only gun-carriage factory in the north of India, have been completely re-modelled, and are now finished. New timber sheds have also been erected, the provision of which will allow of the clearance of the esplanade of the fort at Allaha-
bad, the defences of which received the finishing touches in 1885-86.

The fort at Rawal Pindi was also finished in 1885-86. ^{Fort at Ra-}
The position at Rawal Pindi has now, however, by its ^{wal Pindi.} relation to the north-western frontier defence, become of such great importance that, as before stated, it is held to be necessary to form an extensive entrenched position here.

The fortifications enclosing the arsenal at Ferozepore ^{Ferozepore.} in the Punjab have been reconstructed so as to be capable of maintaining a defence against modern siege artillery; and a wet ditch has been added. The defences here are nearly complete. The arrangements for railway communication with the arsenal are under consideration. Block-houses have been constructed at the bridge abutments for the protection of the railway bridge over the Sutlej.

The fort at Mhow, in Central India, has been ~~much~~ ^{much} Mhow. strengthened by the reconstruction of the four bastions.

The curtains connecting the bastions will be gradually improved as repairs become necessary. The arsenal there is now secure against attack by local forces, which is all that the position requires.

Ahmadabad. The fortified post at Ahmadabad in Gujerat, with its ordnance depôt, should be completed by the end of the current year.

Trimulgherry. The fortified enclosure at Trimulgherry, Secanderabad, which formerly contained a second-class arsenal, but now holds only an ordnance depôt, has been strengthened, and its flank defences improved.

At all the foregoing places there are ordnance establishments. But besides these, defence works have been in progress at various other places.

Miltan. The new fortified post at Miltan has been brought to completion. This work will form a subordinate part of the entrenched position which it is proposed to construct there.

Delhi. The improvement and armament of the fort at Delhi have been carried out; and the necessary works to protect the bridge over the Jumna are complete.

Jhansi. At Jhansi, the old fort has been put into a state of defence; the land necessary for an esplanade has been acquired, and the requisite clearings have been made near the fort and in certain directions radiating from the fort, so as to open out lines of fire towards the railway station and other points. Arrangements have also been made to ensure these lines being kept open. Two hills near the railway station have been prepared to receive guns on their tops.

Rûrki. The canal workshops at Rûrki, on the Ganges Canal in the North-Western Provinces, have been prepared for defence, as a place of refuge. The fort at Cannanore in Southern India has also been adapted for the same purpose. An estimate is under preparation for improving

the fort at Peshawar to make it defensible against any local *émeute*.

At Bangalore the old native fort has been given up *Bangalore.* and transferred to the Mysore Government; and a new entrenchment has been constructed at Agram in the cantonment of Mangalore.

Two other projects of defence of considerable importance have been under consideration, *viz.* :—

- (a) The defences of the Residency at Haidarabad.
- (b) The defences of the harness and saddlery factory and the bridge over the Ganges at Cawnpore.

The first of these has been under consideration for several years. Opinions have varied widely as to the measures which would be most advisable. A decision has now been arrived at regarding the main points on which opinion was divided, and orders have been issued, with the necessary instructions, for the preparation of a detailed estimate for (i) making the Residency building defensible, (ii) providing an outer line of defence, and (iii) constructing a defensible gate-way at the north-west angle of the Residency compound.

The second point presents considerable difficulty. A preliminary report has been received from the Inspector General of Military Works and orders thereon were issued in June 1888, indicating the general character of the system of defence to be adopted. A detailed estimate for the block-houses on the abutments of the bridge, which will form a part of the general scheme, has been sanctioned.

The block-houses for the protection of the bridges at Attock and Sakkar, which were in progress in December 1884, have been completed. Block-houses

*Defences of the
Haidarabad
Residency.*

*Defences of the
harness
and saddlery
factory,
and the
bridge at
Cawnpore.*

*Defences of
bridges at
Attock and
other sta-
tions.*

have also been built at the new bridges at Chak-Nizam over the Jhelum, Kalpi over the Jumna, Benares over the Ganges, and Ferozepore over the Sutlej. The construction of block-houses at Jhelum, over the Jhelum, is in progress. Besides these, the defensive requirements of a number of other bridges are under investigation.

Bolan road.

The Bolan Road, the construction of which was sanctioned and on which work was commenced in 1884, has been completed with the exception of two bridges at Bibinani and Gaitna, which will probably be carried out next year. The amended revised estimate for the entire work amounts to Rs. 216,600, and has been sanctioned by the Secretary of State. This road forms a secure line of communication through the Bolan Pass, safe from serious damage or submersion by floods.

*New road
from Pabbi
to Chapri.*

A new road [from the Pabbi railway station, between Nowshera and Peshawar, to Chapri at the foot of the Cherat hills, and a mule-road in continuation up the hill to Cherat have been constructed. A project for a cart road from Chapri to Cherat is under consideration. This, besides allowing wheeled vehicles carrying invalids or stores, &c., to go through from the railway to Cherat, will be a link in the important strategical road from the Peshawar Valley over the Mirkalan Pass, near Cherat, to the Khairabad-Kohat road, south-east of the Jawaki hills.

Ranikhet.

The station of Ranikhet has been connected by a cart-road with the railway terminus at Katgodam. This road, which has cost Rs. 72,000, has been constructed as a civil work by the Government of the North-Western Provinces and Oudh. A contribution of Rs. 30,000, *plus* the usual percentage for establishment and plant, was given by the Government of India from the military works grant.

The military road from Golaghat to Nichu-guard in Assam, commenced in 1883, is now nearly complete. *Golaghat-Nichu-guard road.* An estimate amounting to Rx. 25,000 for the continuation of this cart road to Kohima has just been sanctioned, and work has been commenced

The line of communication between India and Upper Burma has latterly assumed an increased importance through the annexation of the latter, which has rendered it very desirable to open out communication between it and India by land. The route, according to present information, will necessarily run through Manipur and Tamu to the Chindwin. The best way of connecting Manipur with India is still under investigation, but it seems probable that for some years to come it will be through Kohima to the Brahmaputra Valley, along the Golaghat-Nichu-guard-Kohima road. The other alternative is *via* Cachar. This, though apparently more direct, is from the difficulty of the country between Cachar and Manipur, so far as is at present known, impracticable; but further exploration of this country will be undertaken, when a practicable line may be discovered. *Line of communication between India and Upper Burma.*

The roads necessary for opening out Upper Burma for military as well as civil purposes have been undertaken by the Public Works Department.

A large amount of special work has been undertaken during the last four years in providing barrack accommodation for troops, necessitated by— *Barrack accommodation for troops.*

- (a) The occupation of Biluchistan.
- (b) The rendition of Gwalior, and the consequent abandonment of the cantonment of Morar.
- (c) The increase of the strength of the British garrison in India.
- (d) The annexation of Upper Burma.

- (e) The raising of second battalions of the five Gúr-kha regiments and of new regiments of native infantry.

In Baluchistan the building operations have been principally at Quetta, Loralai and Sinjawi.

At Quetta, complete accommodation was required for two battalions of British infantry, two batteries of garrison artillery, and one of mountain artillery. The barrack accommodation, with cook-houses, wash-houses and latrines, is complete. The station hospital is also complete and in use. Some of the auxiliary accommodation for recreation purposes, &c., has also been provided.

At Loralai, a cantonment has been formed for one battery of mountain artillery (native), three squadrons of native cavalry, and seven companies of native infantry; the last are located in a fortified enclosure. The barrack buildings for the troops and followers are complete, and only the subsidiary accommodation remains to be added.

At Sanjawi, accommodation has been provided for one company of native infantry and 25 sabres of native cavalry, in a fortified enclosure. The barracks are nearly finished, and will be ready for occupation before the cold weather sets in.

Another fortified post is to be established at Anambar, but no work has actually been undertaken there as yet.

The rendition of Gwalior and the withdrawal of British troops from Morar rendered it necessary to provide accommodation elsewhere for the troops formerly quartered in the fortress of Gwalior and the neighbouring cantonment. The troops have been mainly transferred to Jhansi, where barracks for one battalion of British infantry, and one field and one heavy battery of Royal

Artillery are now under construction. The second battalion of British infantry displaced from Morar will eventually be placed in hut barracks in the hills.

The increase of the military garrison of India has rendered necessary additions to the existing barrack accommodation, at various stations.

For the cavalry, new barracks for an additional squadron are under construction at Muttra and Trimulghery. At Lucknow the necessary accommodation is being provided by the adaptation of unused family quarters for occupation by single men, and the rearrangement of the existing accommodation for single men. One new building only has had to be constructed.

For the additional artillery, it will be necessary to construct accommodation for a garrison battery at Aden, Bombay, and Rangoon. The remainder of the increased strength of artillery will be accommodated by a re-appropriation of existing buildings at various stations. But it will be necessary to supplement these to some extent at some places; at Kirkee, an additional barrack has been reported to be necessary.

For the infantry, the only additional new accommodation that has been found necessary has been provided in the shape of hut barracks in the hills and at Rawal Pindi.

The annexation of Burma has led to a considerable body of troops being transferred from India to Upper Burma, who have had to be provided with permanent or temporary accommodation. The eventual distribution of the troops holding Upper Burma can hardly yet be considered settled, but Mandalay and Bhamo seem to be places which must always be occupied in force. Consequently the construction of permanent barracks, has been confined to these two places. At both stations

all essential and immediate requirements such as barracks and hospitals for both British and native troops, officers' quarters, &c., will have been completed by the end of the current financial year. At the other stations occupied by troops the accommodation provided is of a very cheap and temporary character.

The accommodation at Abbottabad for the 2nd battalion 5th Gúrkhas (which, as a portion of the Panjab Frontier Force, is provided with accommodation at the expense of the State), is nearly complete. The State buildings for the other new regiments and battalions are in some cases under construction, and in all cases the necessary steps are being taken to provide them at an early date.

In addition to the foregoing, a number of other works for improving or completing the accommodation for the ordinary garrison of India have been undertaken. The following are the principal of these works :—

At Jalapahar, Darjiling, complete accommodation for a mountain battery has been built. The work was commenced in 1883-84.

At Cherat, the work of providing hut accommodation for one of the battalions of British infantry forming the garrison of Peshawar was actively undertaken in 1885. The work is not yet complete, owing partly to difficulties in getting labour and materials, and partly to scarcity of funds.

At Peshawar, the work of re-modelling and restoring the barracks and hospitals has been steadily pushed on as funds could be made available. The expenditure up to the end of 1887-88 on this work amounted to Rx. 80,000.

Stables for the British cavalry at Sialkot have been provided; and at Faizabad three new barracks for the Royal Artillery at that station have been built.

At Bombay, new barracks for a wing of British infantry and two batteries of garrison artillery, were commenced in 1886, and are now being steadily pushed on. A hospital for British troops at Ahmadabad has been constructed. Barracks for a detachment of European infantry have been built at Kolhapur.

In the Madras Presidency new barracks have been provided for the Royal Artillery at St. Thomas' Mount, and for the detachment of European infantry at Malapuram, and new barracks for British infantry have been commenced at Poonamallee.

The new station hospital for European troops at Rangoon was completed in 1885.

In the Panjab considerable expenditure has been incurred in improving and adding to the barracks of the Panjab Frontier Force. The principal works undertaken are :—

Barracks for four companies of the Corps of Guides at Mardán.

Reconstruction of the centre native infantry lines at Kohát.

Re-roofing and improving the barracks in Fort Dalipgarh.

Reconstruction of the left native infantry lines at Abbottabad.

Extension of the native infantry lines at Dera Ismail Khan.

Besides the works enumerated above a very large number of works of less magnitude have been carried out.

Owing to the great discomfort to which the troops belonging to the Rawal Pindi command (who were in standing camps in the hills during the summer and *But accommodation.*

at Rawal Pindi in the winter) were subjected, and the great cost of the camp equipage for these camps, it was suggested that huts of a simple construction might be provided both at Rawal Pindi and in the hills. The suggestion being approved, a committee met at Simla and worked out a design for such huts, which the Government accepted. The huts constructed according to this design consist of iron standards, carrying a simple iron king-post truss. These frames, as each pair of standards with their truss is called, are spaced six feet apart, and carry the roof-covering of planks and corrugated iron. The walls, which have no weight to bear, are composed of any material such as planks, *pisé*, stone or brick masonry in mud-mortar, &c., whichever is most easily procurable. These huts have been found very satisfactory, and all accommodation hereafter required in the hills, or for occupation during the cold weather only in the plains, will be constructed on this plan. Two battalions of British infantry and four mountain batteries have been hutted at West Ridge, Rawal Pindi; the accommodation for a battalion at Cherat is being constructed on this plan; and a number of huts have been constructed in the Murree Hills, at Dalhousie, Subathu, Jutogh, Chakrata and Ranikhet.

Officers' quarters.

The principal places where the provision of quarters for officers has been undertaken are Quetta, Mandalay, and Bhamo. At these three stations it has been necessary, owing to their special circumstances, to build quarters for the officers of the garrison. At Quetta the work has been carried on contemporaneously with the construction of the barrack accommodation, and about two-thirds of the quarters required have been constructed up to date. By the end of this year sufficient will have been provided to house the great majority of the officers in moderate comfort.

At Mandalay and Bhamo the officers' quarters were not commenced till this year, but as they are of timber, a large proportion will be ready for occupation before the end of the year.

The only other works of any importance connected with accommodation for officers which have been undertaken during the last four years are quarters for field officers in the marine lines, Bombay; for three field officers and four subalterns at Secundrabad; and for married officers at Deolali.

The principal works completed or in progress for the Ordnance Department since December 1884 are the following :—

*Works for the
Ordnance
Department.*

Cossipore.—New smithy in the foundry and shell factory. Considerable alterations and additions to this establishment, to enable the manufacture of new fuzes and the repair of the breech-loading field guns to be carried out, are under consideration.

Ishapore.—A complete water-supply system, for extinguishing fires and for other purposes, has been provided.

Cawnpore.—A new office and pattern-room has been built, and several of the buildings have been extended and improved. The designs for the buildings still required to enable the factory to meet the heavy additional work thrown upon it are being prepared.

Fatehgarh.—New temporary store-rooms have been built and various minor additions made to the gun-carriage factory.

Rawal Pindi.—Quarters for the whole of the warrant and non-commissioned officers of the arsenal establishment have been provided. A new armourer's shop has been built in the arsenal. The extensive additions to the store accommodation now required at

Rawal Pindi, to meet the requirements under the arrangements for mobilization, have just been commenced.

Quetta.—The complete requirements of a second class arsenal are being constructed.

Ahmadabad.—The new ordnance depôt has been completed.

Mhow.—Some additions have been made to the accommodation in the arsenal.

Bombay.—A new export store-room, with an upper storey for a pattern-room, has been constructed in the arsenal. Provision has also been made in this year's estimates for commencing the erection of quarters for the ordnance warrant and non-commissioned officers at Bombay and Kirkee, which are greatly needed.

Kirkee.—Here the imperfection of the small-arm ammunition manufactured at the factory led to a careful investigation of the condition of the establishment. Numerous defects were brought to light, and have now been remedied at a cost of nearly Rx. 10,000. The factory has also been provided with an improved water-supply.

Karachi.—The arsenal has received some important additions, to enable it to cope with the additional work it has now to perform. A new magazine is still required, and the question of its position is under consideration.

Bellary.—A new workshop has been built in the arsenal. But the accommodation in this arsenal is still in an unsatisfactory state, and considerable expenditure will be necessary to provide the store and other buildings which are required.

Works for the Commissariat Department. The commissariat requirements at Quetta have been partly carried out. Owing to the position which Quetta occupies, a very large amount of storage is necessary.

Bakeries have been built at Peshawar and Changligully, and funds have been provided in the current year's estimates for a new bakery at Kampti. The bakery at Rawal Pindi has been improved by the construction of a new oven-shed.

Complete commissariat buildings required in connection with Cherat have been provided at Cherat, Chapri, and Pabbi.

A new commissariat godown is being constructed at Rangoon; and a store-room has been provided at Youngoo.

Quarters for three warrant and five non-commissioned officers of the Commissariat Department have been constructed at Madras; also quarters for one warrant officer have been built at each of the stations of Nasirabad and Nowgong. Quarters for a conductor are being built at Rangoon.

Considerable improvements have been made in the *khedda** premises at Dacca.

A large number of minor works have also been carried out.

Considerable additions have been made to the clothing agency buildings at Alipur, and further extensions are under consideration.

*Works for the
Clothing De-
partment.*

At Kidderpore Dockyard, Calcutta, great alterations are in progress in connection with the new docks under construction by the port commission. The works, however, are being carried out by the port authorities.

*Works for the
Marine De-
partment.*

In the Bombay Dockyard, additional accommodation for storing the armaments of merchant vessels has been constructed; also store-sheds for transport fittings, three coal-sheds and various smaller buildings.

* *Khedda* (properly *khéda*),—the trap or enclosure in which elephants are caught.

It has recently been decided to replace a number of old and almost useless store-buildings, which occupy a large area in the dockyard, by a single range of double-storeyed store-rooms. This building will be commenced immediately.

*General
cantonment
works.*

The water-supply of cantonments has of late received great attention and several important projects have been carried out, and others are in contemplation.

The water-supply system at Peshawar has been extended to the *sudder bazar*.* The works for supplying Umballa and Nasirabad have received certain additions to render them more reliable in seasons of drought. At Chakrata the water-supply system has been completed.

At Mhow a complete system of works has been carried out. A storage reservoir has been formed at Bhaircha, from which the cantonment and bazar are supplied. The cost of this work has been Rx. 60,000. The water has just been brought into use.

Kohima and the hill-fort of Sitabuldi have also each been provided with a suitable water-supply.

The cantonment at Jabalpur has been supplied with good water from the municipal system of the neighbouring town. A similar arrangement has been effected at Karachi, and for the troops at Monkey Point, Rangoon.

The wants in respect of a pure water-supply of Quetta, Rawal Pindi, Murree, Allahabad and Bangalore are now the most pressing, and these are receiving earnest attention.

At Quetta it has been decided to bring in by gravitation through iron piping a supply of 1,250,000 gallons a day for the cantonment, town and railway, from the Hanna stream, the head works being at Lower Urak,

* *Sadr bazar*,—the chief market.

about eleven miles from Quetta. A preliminary project has been submitted to the Government of India, and instructions have been given for the preparation of the detailed estimates. It is hoped that this work will very shortly be commenced.

At Rawal Pindi preliminary arrangements have been agreed upon with the municipality for taking a supply of water from the municipal main just above the city; and the system of distribution in the cantonment has been provisionally settled. A provision of Rx. 10,000 has been made in the current year for commencing this work, which will be undertaken immediately.

The recent severe outbreak of cholera at Murree has emphasized the necessity of taking decisive measures to secure an uncontaminated supply of water for the troops in and about that place. A committee has been assembled to investigate the subject, and their report has just been received. The committee have carefully examined all known sources of supply, and have come to the conclusion that the only complete remedy for the present state of things is to bring in a supply from a distance, the place they suggest as the best source being Dunga-gully. This will be an expensive measure, and before being adopted will receive full investigation, for which the necessary orders have been issued.

At Allahabad a scheme has been drawn up for pumping up water from wells in the Ganges to a raised distributing reservoir in cantonments. The municipality, however, are about to construct works for supplying the city, and correspondence is going on with a view of arranging that both the city and cantonment should be supplied from one system. If there is any difficulty or serious delay in arranging for a joint scheme, the project for an independent supply to the cantonment will be carried out.

At Bangalore, the unsatisfactory nature of the present system of water-supply has been long felt. A number of schemes are under consideration by the Government of Madras and the Resident in Mysore. Every effort is being made to work out a practical scheme, which will be carried out as soon as possible.

Enquiries have also been instituted with a view of bringing in a pure supply of water from a distance for Lucknow and Amritsar.

Other works for the improvement of cantonments, such as metalling roads, improving the drainage system, &c., which cannot be stated in detail, have been carried out.

Corps of labourers for service at Suakin.

In February 1885 Captain T. P. Cather, R.E., an executive engineer of the Military Works Department, was selected to raise and organize a corps of labourers for service at Suakin.

The corps was organized chiefly for general service with the troops, but included a considerable proportion of railway labourers; it was composed as follows:—

4 officers.	9 jemadars.
2 overseers.	6 head gangers.
2 clerks.	35 plate-laying mates.
1 store-keeper.	10 bildar† mates.
1 cashier.	590 plate-layers.
1 draughtsman.	200 bildars.
4 munshis.*	100 artisans.

The work done by the corps was of a very varied character, *viz.*, railway construction, providing hutting and miscellaneous accommodation for troops, construction of piers and entrenchments, ordnance work, water-supply, removal of commissariat stores, &c. The excellent manner in which Captain Cather and his corps acquitted themselves received the approbation of the Government of India and of the Secretary of State.

* *Munshi*,—a native writer.

† *Bildar*,—(properly *bel-lar*,)—a pioneer, or digger, or user of the *bel*, or spade.

CHAPTER XI.

MARINE.

Before entering upon a statement of the measures proposed and carried out in the Marine Department during the period of the Marquess of Dufferin's Viceroyalty, it seems desirable, as the Indian Marine has been formed so recently, to give a brief account of its constitution and organization, and a short description of its establishments, fleet, dockyards, and marine survey department, and of the East India squadron of the Royal Navy.

I.—Historical.

The naval service of the East India Company was established about the year 1600, for all naval duties in the Indian seas. This service was afterwards called the Indian Navy, and placed under articles of war. It performed war and police service, was used for purposes of survey, and, at times, for the transport of mails or troops. Its head-quarters were at Bombay.

It won renown in engagements against the Portuguese, Dutch, and French, contributing largely to the task of building up the structure of the Indian Empire; and was subsequently engaged in naval operations in Burma, China, and Persia.

The amalgamation of the Indian Navy with the Royal Navy, which had been proposed on the dissolution of the East India Company, was opposed by the Admiralty; and the former was abolished on the 30th of April 1863, when it was decided that the defence of India against serious attack by sea should be undertaken by the Royal Navy, which should also perform, in the Persian Gulf, the services which had hitherto been allotted to the

Company's ships of war. It was also decided that there should be two local services, the Bengal and the Bombay Marine.

The Bengal Marine was already in existence, though there was no legal authority for it. Its officers were not appointed from England, and held no recognised rank.

These two services were not to be under martial law. They were to be on a reduced scale, maintained for the protection of the Indian ports, the suppression of the slave trade and piracy, the transport of troops and stores, and the performance of such duties afloat as could not advantageously be undertaken by vessels of the Royal Navy.

Although, by this arrangement, the cost of the Indian fleet was reduced, on the other hand considerable expense was entailed on the Indian Government, which was required to pay the Admiralty an annual subsidy of £70,000 for the services of six of Her Majesty's ships, and maintain a separate surveying establishment costing £20,000 a year.

A Master Attendant was appointed as the head of the Bengal Marine, and a Superintendent of Marine as the head of the Bombay Marine. The Bengal Marine was under the Government of Bengal, and the Bombay Marine was placed under the Government of Bombay; but both services were under the control of the Government of India.

The arrangement was, however, found to be unsatisfactory. Gradually the number of vessels, both of the Bengal and of the Bombay Marine, decreased; the control exercised by the Governments of Bengal and Bombay over the services was imperfect, and no proper check was kept either of the employment of the vessels, or of the expenditure incurred on their account.

In order to put matters on a better footing, it was considered desirable to obtain the services of a good professional officer, and appoint him as the controlling head. The Home Government was accordingly asked to send out an experienced officer to inspect and report on the marine establishments of India. Admiral Sir William Mends was selected for this duty, and made various suggestions. It was found that, to give effect to the reforms suggested by Sir William Mends, it would be essential for the Government of India to have a naval officer of judgment and experience; one was therefore applied for, and Captain (afterwards Rear-Admiral) Bythsea, C.B., V.C., R.N., was sent out by the Admiralty and appointed "Consulting Naval Officer."

In January 1875, Captain Bythsea submitted a report on the subject, and it was decided—

I.—To have one marine service for India, to perform all the duties that could not be provided for by ships of the Royal Navy, or which could not be placed under the control of local bodies like the port commissioners of Calcutta.

II.—That the service should be controlled by a Royal Navy officer immediately under the Government of India; that his tenure of office should be for five years, and that his designation should be "Director of the Indian Marine."

III.—That the service should be called the "Indian Marine" or "Her Majesty's Indian Marine."

IV.—That a special law should be passed for the regulation of the service.

V.—That pilot establishments, light-ships and lights, should remain under local Governments, or under port or harbour commissioners.

VI.—That the service should be graded.

These decisions were embodied in a despatch which was sent to the Secretary of State in April 1876.

The Secretary of State approved generally of the conclusions at which the Government of India had arrived, and communicated detailed instructions as to the basis on which the service should be constituted.

His Lordship directed that the Bengal and Bombay marine services should be amalgamated, the members being graded and classified, and that vessels should be classified; and he added that a bill would be laid before Parliament providing for the maintenance of discipline in the Indian Marine, and giving the Government of India power to frame regulations for the service.

On receipt of this despatch, a committee, presided over by Rear-Admiral Bythesea, assembled to report on the various details connected with the constitution of the service. On the 6th July 1877, orders were issued directing that the whole of the marine establishments afloat and on shore should be graded, classed and amalgamated; that the service, to be designated "Her Majesty's Indian Marine," should be under the direct control of the Government of India; that officers should be appointed by the Secretary of State; that pilot establishments, local lights and light-vessels, conservancy of rivers and ports, and shipping duties, should not form part of the Indian marine service; and that superior port appointments in India should be held by Indian marine officers.

The Committee went thoroughly into the question of the organization of the Marine, and submitted

proposals regarding the classification of vessels, requirements of the service, election and grading of officers and dockyard establishments, and on many other heads of minor importance.

The Committee recommended that 24 vessels should be regarded as belonging to the Marine and retained as Imperial, the others being handed over to the Government of Bengal.

With regard to the officers, the Committee, in recommending their classification, suggested that they should receive commissions; that the establishment should consist of 88 officers, 71 engineers and 13 clerical officers afloat, 22 gunners and 6 medical subordinates.

In forwarding the Committee's report to the Secretary of State, the Government of India expressed their concurrence generally in its recommendations, but said that they reserved several of the questions for consideration future. The Government recommended that the Imperial Marine should consist of 23 vessels and 6 flats. The proposals of the Committee about the selection, grading, &c., of the officers were also approved by the Government of India, who, however, recommended to the Secretary of State that there should be 97 officers, 64 engineers, 18 gunners and 11 clerks, for the 24 ships to be retained as Imperial. The Government of India also asked the Secretary of State whether he approved of the establishment proposed, and the titles which were recommended for the officers.

In March 1880, the Secretary of State sanctioned the proposed classification of the engineer establishment only; and the following establishment was laid down:—

Chief engineers	...	...	5
Engineers	...	...	25
Assistant-engineers, 1st class	...	...	21
„ „ 2nd class	...	...	13

In October 1881, His Lordship was reminded regarding the recommendations made about the other officers, and he was at the same time furnished with a statement showing the number of officers that were then employed in the service, and the number it was proposed to have. The proposed scale gave an increase of 15 officers. This increase, it was remarked, had been found necessary to meet requirements. It was also suggested to the Secretary of State that the establishment should, for the future, be subject to increase or decrease according as the number of vessels might be added to or reduced.

In February 1883, the Secretary of State replied, expressing his approval of the establishment of officers which had been recommended, and in June 1883 he directed, with regard to their status, that they should not receive commissions, but letters of appointment signed by the Viceroy. Nothing was said about the establishment, grading, &c., of the officers.

On receipt of these despatches, the following establishment of officers was ordered :—

Commanders	...	...	8
1st grade officers	...	...	32
2nd „ „	...	...	19
3rd „ „	...	...	13
Gunners „	...	...	20

Since the establishments of officers and engineers were first laid down, some of the vessels which belonged to the Indian Marine have been disposed of, and new ships have been acquired. Thus changes in the establishments of officers and engineers have been constantly necessary to meet requirements. These changes have not, however, involved any material increase or decrease of establishments.

II.—Establishments.

The Director of the Indian Marine is the executive head of the service, with his head-quarters at Bombay. He is appointed for a term of five years. At Calcutta there is a Deputy Director, an appointment which is reserved for officers of the Indian Marine.

Captain Hext, R. N., was appointed Director of the Indian Marine on the 26th February 1883, and on the expiry of his first term of appointment was re-appointed for a second term of similar duration. He still holds office. Captain Campbell is the Deputy-Director.

The establishment of officers and gunners stands as follows :—

Commanders	...	...	25*
1st grade officers	...	...	32
2nd ditto	...	...	19
3rd ditto	...	...	13
Gunners	...	...	20

The establishment of engineers is :—

Chief engineers	...	...	6
Engineers	...	...	24
Assistant-engineers	...	...	25
Engine drivers	...	...	6

The following additional establishment has also been sanctioned temporarily for vessels in Burma :—

Engineers	...	...	6
Assistant-engineers	...	...	8

There is an Agent for Government Consignments at Calcutta, who is an officer of the Indian Marine, but is not employed exclusively on marine duties.

The marine accounts are audited by the Examiner of Marine Accounts, who is at present subordinate to the Controller of Military Accounts. His office is to

* That is to say, 8 for the command of vessels and 17 for shore appointments. Commanders are classified as 1st, 2nd and 3rd class.

be transferred to Bombay in April 1889, when he will become the "original account officer."

III.—Fleet.

The Indian Marine fleet now consists of the following vessels :—

<i>Abyssinia</i> ...	{	Turret-ships for harbour defence at Bombay. Armed with four 18-ton R. M. L. guns and two 7-pr. boat guns. The 8-inch R. B. L. mark VI gun is to be substituted for the 18-ton gun.
<i>Magdala</i> ...	}	
<i>Canning</i> ...	{	Troop-ships.
<i>Clive</i> ...		
<i>Dalhousie</i> ...		
<i>Tenasserim</i> ...		
<i>Comet</i> ...	}	Armed river steamer, employed under the Political Officer, Bagdad. Armed with two '45" Nordenfelt guns.
<i>Enterprize</i> ...	{	Employed on general duty at Rangoon.
<i>Investigator</i> ...		
<i>Irrawaddy</i> ...	{	Armed river steamer, employed on general duty on the Irrawaddy. Armed with two 20-pr. R. B. L. guns and two 1" Nordenfelts.
<i>Bhamo</i> ...		
<i>Pagan</i> ...	}	Armed steamers, employed on general patrol duty in Burma. Armed with two '45" Nordenfelts each.
<i>Patrick</i> ...	{	Armed steamers, employed on general duty in Burma. Armed with one Gardiner gun each.
<i>George</i> ...		

<i>Sladen</i>	...	{	Armed steamer, employed on general patrol duty in Burma. Armed with two 12-pr. brass howitzers, two 1" Nordenfelts, and two .45" Gardiners.
<i>Lawrence</i>	...	{	Despatch vessel, employed under the orders of the Resident, Persian Gulf.
<i>Quangtung</i>	...	{	Guard-boat at the Andamans. Armed with six 9-pr. R. M. L. guns.
<i>Rohtas</i>	...	{	State yachts.
<i>Gemini</i>	...	{	
<i>Tigris</i>	...	{	River steamer, doing general duty at the Kidderpore dockyard.
<i>Nancowry</i>	...	{	Tender to the <i>Quangtung</i> . Armed with one 9-pr. gun.
<i>Ganges</i>	...		Troop-flat.
<i>Alexandra</i>	...	{	Small steamers, employed on torpedo work at Calcutta.
<i>Leopard</i>	...	{	
<i>Handy</i>	...	{	Small steamers, employed on torpedo work at Rangoon.
<i>Tamil</i>	...	{	
<i>Sapper</i>	...	{	Small steamers, employed on torpedo work at Karachi.
<i>Miner</i>	...	{	
<i>Muzbee</i>	...	{	Small steamers, employed on torpedo work at Bombay.
<i>Tickler</i>	...	{	
<i>Condor</i>	...	{	Small steamer, lent to the Assam administration.
<i>Lark</i>	...	{	Small steamer, lent to the executive engineer, Fort William.
<i>Lizard</i>	...	{	Small steamers, employed under the Chief Commissioner of the Andamans.
<i>Locust</i>	...	{	

Besides the vessels named, the following have been ordered from England in connection with the defence of Indian ports :— .

Torpedo-boats, each armed with two 3-pr. quick-				
firing guns, two 1-inch Nordenfelts, 5				
torpedos	...	...	...	7
Gun-boats, armament uncertain	...	...	...	2
Guard-boats	...	...	...	2

The guard-boats are to be of two kinds,—Class II and Class III. Class II boats are each to have one 3-pr. quick-firer, and two 5-barrel machine guns. Class III boats are each to have one 3-pr. quick-firing gun.

The guard-boats ordered from England are to be of Class II. When they are received from England, five others of the same pattern will be built in India. There is also to be a Class III guard-boat, but boats of this description are not to be specially built, as the Government launches which already exist at the various ports can be supplemented for this purpose by suitable launches belonging to private firms in sufficient numbers to complete the necessary establishment, and can be armed and utilized when the need arises. No Class I boats are to be provided, as they are considered to be too large, and the cost would be excessive.

These additions to the marine vessels will necessitate an increase to the establishments of officers and engineers.

IV.—Dockyards.

There are three Government dockyards in India, *viz.* :—

The Bombay Dockyard.

The Kidderpore Dockyard.

The Dalla Dockyard at Rangoon.

The last has no Government establishment, as the vessels in Burma are not numerous enough to keep it employed, and it has been leased to the Irrawaddy Flotilla Company for Rs. 3,600 a year.

The Bombay Dockyard has the following establishment :—

- Staff officer.
- Constructor.
- Chief builder.
- Inspector of machinery.
- Store-keeper.
- Accountant.
- Builders' foreman.
- Foreman of factory.
- Foreman of foundry.
- Foreman boiler-maker.
- Assistant boiler-maker.
- Master rigger.
- Draftsman.
- Engineer in charge of the yard craft.

The Bombay Dockyard is under the direct control of the Director and Assistant-Director of the Indian Marine.

The Kidderpore Dockyard has the following establishment :—

- Staff officer.
- Constructor.
- Chief builder.
- Inspector of machinery.
- Store-keeper and accountant.
- Foreman of the factory.
- Foreman of the foundry.
- Foreman boiler-maker.
- Assistant boiler-maker.
- Boatswain of the yard.

Draftsman.

Engineer in charge of the yard craft.

The Kidderpore Dockyard is under the direct control of the Deputy-Director of the Indian Marine.

V.—Marine Survey Department.

There is a marine survey department in India, which forms part of the Indian Marine. It is officered partly by officers of the Indian Marine and partly by officers of the Royal Navy lent by the Admiralty. These latter are appointed for a term of five years.

The department consists of—

- 1 surveyor in charge.
- 2 first class assistant-surveyors.
- 2 second „ „ „
- 2 third „ „ „
- 4 fourth „ „ „
- 1 surgeon-naturalist.

VI.—East India squadron of the Royal Navy.

It has been mentioned that the defence and protection of the Indian seas is entrusted to the Royal Navy.

The East India squadron at present consists of the following vessels of the Royal Navy :—

Bacchante.

Osprey.

Griffon.

Mariner.

Turquoise.

Sphinx.

Kingfisher.

Reindeer.

Ranger.

Algerine.

The squadron is commanded by a rear-admiral, who is designated the Commander-in-Chief of the East India squadron.

In 1869 an arrangement was made with Her Majesty's Government under which six of the vessels on the East India station were to be placed at the disposal of the Government of India, who in return agreed to pay an annual contribution of £70,000 towards their maintenance. These six vessels were generally detailed as follows :—

Three for the Persian Gulf, of which two were always in the Gulf and one refitting at Bombay.

Two in the Bay of Bengal (one at Trincomalee, and the other generally at Rangoon).

One at Aden.

The number of ships has been reduced from six to four for the year 1888-89, the subsidy being fixed provisionally at £38,500.

The four vessels now on the East India station, on account of which the subsidy is paid, are the *Osprey*, *Turquoise*, *Sphinx* and *Kingfisher*.

VII.—Measures proposed and carried out during Lord Dufferin's Administration.

PERSONNEL AND ESTABLISHMENTS.

By the statute 47 and 48 Vict., c. 38, powers were conferred on the Governor-General in Council to pass, for the Indian marine service, an Act containing penal provisions similar to those of the Naval Discipline Act. A legislative enactment was framed accordingly and passed, and as Act XIV of 1887 (*The Indian Marine Act*) came into force on the 15th October 1887. This important Act places the Indian Marine on a legal basis. Previous to this the service had no legal status, as it was not subject either to the Naval Discipline Act, 1866, or to the Merchant Shipping Act, 1854.

*Grading of
Commanders.*

In 1885, proposals were made by the Government of India for a revision of the establishment of commanders, by which all officers, whether holding shore appointments or the command of vessels, were graded according to seniority, and officers holding shore appointments, instead of receiving consolidated pay, were to get pay of grade, plus the staff pay of appointment. These changes were considered necessary owing to the introduction of new pension rules for the Indian Marine, and were sanctioned by the Secretary of State. The establishment now consists of 25 commanders, divided into three grades.

*Increase to
the establish-
ment
of
engineers.*

When the Indian Marine was organized, the engineer establishment was fixed to suit the requirements of the service at that time. The establishment provided for 58 engineers of all grades, costing about Rx. 1,150 per month. It was revised in 1885, when three engine-drivers, two on Rs. 100 each, and one on Rs. 75 a month, were added, to meet requirements.

In 1887, a further revision was found to be necessary, owing to the additions to the Indian Marine fleet, which became necessary on the annexation of Upper Burma. The establishment was, accordingly, increased by two permanent and thirteen temporary engineers, at an extra annual cost of Rx. 2,863.

*Officer-
ing and man-
ning
of Indian
Marine
war vessels.*

In March 1887, a scheme was submitted to the Secretary of State for officer- ing and manning the turret-ships, and the gun and torpedo boats which are being built for India. But, as the cost of officer- ing and manning them all was found to be very great, it was proposed to the Secretary of State that crews should be provided for only half the number of vessels at a monthly cost of about Rx. 1,600. This scheme provided for the officer- ing and manning of the vessels independently of the Royal Navy, as the Admiralty stated that they

would be unable to spare any officers and men of that service in time of war. The Secretary of State has been asked to obtain from the Admiralty a few officers and warrant and petty officers, to form the instructional staff. The matter is still under consideration in England.

In consequence of the intended addition of torpedo and gun-boats to the Indian Marine fleet, it was deemed advisable that a few officers of the marine should be instructed in gunnery and the use of the torpedo. The Director of Marine was, accordingly, instructed to depute to England yearly four officers for the purpose of attending the classes on board the *Excellent* and *Vernon*. These officers receive free passages to and from England, and subsistence and travelling allowances while there, according to a fixed scale which has been approved by the Secretary of State.

Deputation of Indian marine officers to England for instruction in gunnery, &c.

The pay and allowances of officers and engineers of Her Majesty's Indian Marine deputed to England on special duty were formerly adjusted in accordance with the rules in the Civil Code, but as this was found unsuitable, fixed scales have been drawn up, and approved by the Secretary of State.

Allowances in England of officers and engineers of the Indian Marine.

In 1885, the Secretary of State gave his sanction to a scale of pensions to officers and engineers of the Indian Marine, and also to a scale of compassionate allowances for the widows and children of officers meeting a violent death in the execution of duty. In 1887, certain modifications were made in this scale. The general result of the provision thus made is that the Government of India secure a body of officers, whose interest it is to continue permanently in the service.

Indian Marine pensions.

The office of the Examiner of Marine Accounts was formed in 1879 and located at Calcutta, the duties being carried out under the general direction of the Controller of Military Accounts, Bengal, who was made

Transfer of the office of the Examiner of Marine Accounts to Bombay.

the "original account officer" responsible to the Government of India for the collection and consolidation of the marine accounts. At the instance of the Finance Commissioner, orders were issued transferring the examiner's office to Bombay and constituting him an "original account officer."

This arrangement, it is expected, will result in a considerable saving, as it will afford the Director of Marine greater opportunities of consulting the examiner on questions affecting the economical administration of the marine service.

*Reductions
in the Marine
Account and
Audit De-
partment.*

The Finance Commissioner recommended the abolition of the posts of accountant at the Bombay and Kidderpore dockyards, and the reduction of the pay of the Examiner of Marine Accounts, and of the superintendent of his office.

On these recommendations, the appointments of storekeeper and accountant at the Kidderpore Dockyard were amalgamated; the pay of the Examiner of Marine Accounts was reduced from Rx. 150 to Rx. 100 a month, and the post of superintendent of his office abolished: by these measures a saving of Rx. 160 a month has been effected.

The question of amalgamating the posts of accountant and storekeeper in the Bombay Dockyard will be considered on the transfer of the office of the Examiner of Marine Accounts to Bombay.

FLEET.

*Changes in
the Marine
fleet.*

In 1885, two steamers of the *Miner* class, *Tamil* and *Muzbee*, were ordered from England for sub-marine mining work. They arrived in 1887, and were stationed at Rangoon and Bombay respectively.

During the operations in Upper Burma in 1885, one of King Theebaw's steamers was captured; she has been named the *Sladen*, and added to the Indian Marine fleet.

In January 1887, the despatch vessel for the Persian Gulf, the *Lawrence*, the construction of which was ordered in 1884, arrived from England, and was placed at the disposal of the Political Resident in the Persian Gulf.

A trooper, the *Dalhousie*, has also been added to the Indian Marine fleet. She arrived in 1887, and has been employed in trooping in Indian waters. She is now stationed at Aden.

The *Bhamo* and *Pagan*, light draught, stern wheel steamers, were got out from England in pieces, and put together at Rangoon. These steamers are employed on patrol duties in Upper Burma. In addition to these, two twin-screw steamers, (*Patrick* and *George*), were also obtained from England for patrol work in Burma.

During the last few years some old vessels of the Indian Marine have been disposed of. The *May Frere* was sold in 1885. In 1887, the *Czarewitch* was sold to the Bombay Government for use as a police hulk, and the *Jaboona* and *Sir William Peel* were sold in 1888. In 1887, orders were issued for the abolition of the hulks at Bombay and Calcutta. The *Semiramis* and *Koel* were accordingly sold. The hulk *Auckland*, which was maintained for the use of Royal Navy crews in Bombay, was sold in 1888. In April 1888, the *Koladyne* and flat *Sonamukhi*, maintained for the use of the Chief Commissioner, Assam, were made over to the local government, with an increase to the provincial assignments.

Vessels purchased for the Indian Marine, since 1884.

<i>Dalhousie</i>	}	About £83,476.
<i>Lawrence</i>		
<i>Tamil</i>		
<i>Muzbee</i>		
<i>Bhamo</i>	}	£19,050 each.
<i>Pagan</i>		
<i>Patrick</i>	}	£9,200 each.
<i>George</i>		

Vessels of the Indian Marine sold since 1884.

	Rs.		Rs.
<i>Amberwitch</i> ...	21,000	<i>Koel</i> ...	5,000
<i>Auckland</i> ...	19,000	<i>May Frere</i> ...	15,500
<i>Czarewitch</i> ...	25,000	<i>Seminamis</i> ...	17,000
<i>Jaboona</i> ...	20,000	<i>Sir William Peel</i>	25,000

The *Patrick Stewart* formerly formed part of the Indian Marine fleet, but was employed on telegraph duties in the Persian Gulf, an arrangement which led to some inconvenience. On the 1st June 1887, the vessel was therefore handed over to the Director of the Persian Gulf telegraphs.

*Re-armament
of the tur-
ret ships.*

The question of the re-armament of the Indian Marine turret-ships, *Abyssinia* and *Magdala*, was raised in 1885, in connection with the scheme for the fortification of the Indian ports. These vessels are armed with 10" M.-L. (18-ton) guns. The Defence Committee represented that these guns were somewhat obsolete, and recommended their replacement by the more powerful 9·2" B.-L. gun.

After much correspondence between the Secretary of State and the Government of India, as to the desirability or otherwise of substituting the 9·2" gun, it was considered that this armament would not be suitable, and it was finally decided to substitute 8" B.-L. guns, mark VI, for the 10" M.-L. guns.

Arrangements are being made to carry out this change of armament.

*Torpedo-boats
for Indian
harbours.*

In 1885, the Defence Committee submitted to the Government of India, a scheme for the defence of the Indian ports. One feature of these proposals was the increased importance attached to gun-boats and torpedo-boats as a means of distracting the attention of vessels of war attacking land batteries. The Government of India, accordingly, asked the Secretary of State to order the

construction of torpedo-boats for the protection of Indian harbours. Seven torpedo-boats are now under construction, *viz.*, two for Karachi, three for Bombay, one for Calcutta, and one for Rangoon, at an estimated cost to India of £115,700, which includes armament. The Government of India were also desirous of obtaining two torpedo-boats for Aden; but, as Her Majesty's Treasury refused to bear part of the cost, the provision of these boats has been deferred.

Besides these, two gun-boats to cost £30,500, and two gun-vessels of the *Sharpshooter* type, each to cost £65,000, have been ordered from England.

In 1884, the Inspector-General of Military Works *✓ sets for the sub-marine mining service* having represented the necessity for the maintenance of a fixed number of steamers and launches at Calcutta, Bombay, Karachi and Rangoon, the following establishment of vessels was laid down for each of the ports mentioned: one steamer, one steam launch, one flat, two or more row-boats. These were to be provided gradually. In 1885, the *Tamil* and *Muzbee*, special steamers of the *Miner* class, were, as has been mentioned before, ordered from England. They arrived in January 1887, and were sent to Rangoon and Bombay.

In addition to the vessels which it was decided to *Guard boats,* provide at Calcutta, Bombay, Karachi and Rangoon, for sub-marine mining service, it was considered necessary to supply these ports with guard-boats for the protection of the mine fields.

The Defence Committee proposed the provision of three classes of such boats: Class I, to be powerful sea-going boats; Class II, boats of smaller size; and Class III, ordinary steam-launches.

As previously mentioned, it was decided not to have boats of Class I. Those of Class III were to be hired from private firms.

Government decided to provide seven Class II guard-boats of White's "turnabout" pattern, giving two to Calcutta, two to Bombay, two to Rangoon, and one to Karachi. Two of these have been ordered from England as patterns; the remainder will be built in India. Each boat is to be armed with one 3-pr. quick-firing gun and one 1" two-barrelled Nordenfelt machine-gun.

*Launches for
Burma.*

With a view of restoring order in Upper Burma, the Commander-in-Chief in India represented that it was necessary for the troops to be able to move about freely; and that, to do this, efficient transport was required. It was suggested that the provision of light draught steamers would ensure the conduct of rapid operations and effect economy in land transport.

The Chief Commissioner of Burma asked the Director of Marine to draw up a scheme for the patrol of the Irrawaddy and its affluents by an armed flotilla, consisting of three Indian Marine vessels, with three tenders and two steam launches. These were found to be insufficient, and the flotilla was increased. It now consists of seven steamers, 25 launches, and two flats.

In addition to the vessels already mentioned, the Chief Commissioner was afterwards empowered to construct five flats for trooping and river-police duties, so as to render him independent of aid from the Irrawaddy Flotilla Company. This was done with the object of reducing expense, as the charges for hire were very heavy.

DOCKYARDS.

*Transfer of
a portion of
the Kidder-
pore Dock-
yard to the
Calcutta Port
Commission-
ers.*

For some years, the Government of India had under consideration the question of providing additional facilities for the increasing export and import trade of the port of Calcutta.

Of many schemes, one for the construction by the port commissioners of wet docks within the limits of

the port, was finally approved. As the site of the Government Dockyard at Kilderpore was the most convenient one, the Government of India, with the permission of the Secretary of State, transferred a portion of the yard to the port commissioners under certain conditions, the chief of which were:—

- I.—That the port commissioners should construct new buildings for those that stood on the land transferred to them.
- II.—That they should construct a new steam-dock for the Government.
- III.—That they should grant Government free access to their tidal basin for the purpose of docking and undocking ships.
- IV.—That Government vessels should be allowed to use quay space in the tidal basin for a reasonable period, free of charge.

It having been found that the work performed in the dockyard at Dalla, Rangoon, was incommensurate with the cost of its maintenance, it was decided, in 1882, to lease it to the Irrawaddy Flotilla Company for Rx. 2,500 a year. In August 1888, the lease was renewed for ten years at a yearly rental of Rx. 3,600, the company undertaking to execute all repairs or construction of Government vessels either at Rangoon or Mandalay, charging only the actual cost of materials and labour, and an additional 25 per cent. to cover the cost of supervision, &c.

*Leasing of the
Dalla Dock-
yard to
the Irrawad-
dy Flotilla
Company.*

The hydraulic lift at Hog Island, Bombay, which was sent out by the Secretary of State in 1868, proved to be of very little use to the Government. It was a source of considerable expense, and was fast becoming unserviceable. In 1884, it was decided to thoroughly repair and make it over to any of the large shipping companies willing to take charge of it. Up to December.

*Leasing of the
hydraulic
lift to the
P. and O.
Company.*

1887 about Rx. 330,000 had been spent on the lift, while its earnings amounted to but a few thousand. It was then made over to the P. and O. Company on a five years' lease. The Government thus save the cost of the establishment employed in looking after the lift, and, at the same time, have it kept in working order.

*Revision of
the Kidder
pore Dockyard
staff.*

In 1887, the Director of Marine represented that the executive heads of the different departments of the Kidderpore Dockyard, though efficient up to a certain point, were behind the times and not up to modern requirements. He submitted proposals for a revision of the staff, and urged the appointment to it of a constructor. These, and certain proposals which the Finance Committee also submitted about the same time, led to the re-organization of the staff of the Kidderpore Dockyard and a few changes in the Bombay Dockyard. The *personnel* of the Kidderpore Dockyard underwent a complete change, and a constructor was appointed. By this revision, a reduction of expenditure to the extent of Rx. 426 a year has been effected.

MARINE SURVEY DEPARTMENT.

*Reorganiza-
tion of the
Marine Sur-
vey Depart-
ment.*

In 1887, the Finance Committee brought to the notice of Government what they considered to be the excessive cost of the Marine Survey Department, in the matter of officers' salaries. After careful consideration, a revised establishment, with a modified scale of pay, was recommended to the Secretary of State. The proposals therein made were sanctioned, and have been carried out. Under the new organization the establishment is reduced by four officers, and the ultimate annual saving is estimated at Rx. 3,000.

*Work done
by the M. S.,
D. 1884-87.*

Since 1884, the Marine Survey Department has produced 43 charts and plans.

In 1884, the Cheduba straits, Pilot Ridge, Palmyra shoals, and the Orissa coast from Balasore to the Dhamra river, were surveyed. Surveys of the ports of Bhavnagar and Kyouk Phyoo were commenced, and the Bay of Bengal was sounded about False Point, Palmyra Point, &c. An examination was also made of the mysterious sub-marine ravine called the "swatch of no ground." In 1885, the survey of Kyouk Phyoo and Bhavnagar was completed, and parts of the Bombay harbour were sounded.

In 1886, the officers of the Marine Survey Department were employed in making a survey of the China Bakir entrance of the river Irrawaddy, with a view to its use by the transports conveying the Upper Burma expeditionary force to Rangoon. On completing this, the majority of the officers were employed in piloting the expedition up to Mandalay and subsequently to Bhamo. During the same year the Yè river, Chittagong, Megna flats, Tripalur reef and other minor surveys, were carried out.

In 1887, Rockingham Patch, Pedro Point (Ceylon) and the ports of Porbandar, Cannanore and Telicherry were surveyed, and the survey of the Andamans was also commenced.

As Dr. Giles, the surgeon-naturalist to the *Investigator*, was absent during 1885 and 1886, no work was done in the naturalist's department. Since his return, however, he has succeeded in making a collection of marine specimens of animal and plant life, which he has described and classified in communication with Dr. Wood Mason of the Indian Museum, Calcutta.

EAST INDIA SQUADRON OF THE ROYAL NAVY.

In 1887, the Government of India addressed the Secretary of State on the subject of reducing the annual subsidy of £70,000 to the Admiralty, and

Reduction in the number of ships of the Royal Navy on the East India station.

represented that instead of six ships of war, four would suffice, *viz.* :—

- 1 in the Bay of Bengal;
- 1 in the Persian Gulf;
- 1 at Aden;
- 1 in reserve at Bombay.

With this reduction in ships, a proportionate reduction in the subsidy was stipulated for.

The subject was considered by a committee in England. This Committee, in their report dated the 26th September 1887, recommended that, subject to certain conditions, the number of ships should be reduced to four, and the subsidy fixed at £38,500. The Committee's recommendations were approved by the Secretary of State; but the Lords Commissioners of Her Majesty's Treasury were not satisfied with the conclusions arrived at by the committee, and decided that the arrangement recommended should be adopted for one year only, after which the matter should be reconsidered. It was intended that the saving effected by the reduction in the amount of the subsidy should be utilized in paying for the establishment required for the manning of the torpedo-boats and turret-ships maintained by India, thus adding to the naval strength of the Empire in Indian waters. The Government of India consequently urged that no alteration of the present arrangement should be made without reference to them.

*Inefficiency
of the Royal
Navy squad-
ron on the
East India
station.*

In marine despatches No. 14 of 1887 and Nos. 5 and 12 of 1888 the Government of India brought to the notice of the Secretary of State, the inefficient condition of the East India squadron. The matter is important, as, at present, owing to deficiencies in size, speed and armament, the squadron is, in the event of a hostile coalition, scarcely powerful enough to ensure the thorough protection of commerce in Indian waters. The Admiralty

in reply stated that the ships were, in their opinion, adequate for the services required of them, but promised to send the *Mohawk*, one of the new fast cruisers, and also a flagship of superior type, as soon as a suitable dock at Bombay should be constructed.

The question of constructing a new dock at Bombay of size sufficient to accommodate the largest ironclads is under the consideration of Her Majesty's Government.

BURMA.

In October 1885, the Director of Marine was instructed to make arrangements for the transport to Rangoon of the Burma Expeditionary Force. Under the arrangements made by him, the force was conveyed to Rangoon in Indian Marine and hired vessels; from Rangoon it was transported up the river in the steamers and flats of the Irrawaddy Flotilla Company, and a few river vessels of the Indian Marine.

*Naval operations
in
Burma,
1885-86.*

The Indian Marine vessels employed with the expedition were armed and placed in command of Royal Navy officers, the officers of the Marine remaining on board for the discharge of their ordinary duties, but subject to the orders of the Royal Navy officers in command.

To the Indian Marine gun-boat *Irrawaddy* belongs the honour of having, in company with the launch *Kathleen*, opened the campaign on the 14th November, by the capture of a Burmese steamer and two flats from under the protection of an earthwork at Sinbougweh, near Nyoung-ben-maw, on the right bank of the Irrawaddy, about twenty-eight miles above Thaytmevo.

The fleet of steamers conveying the expeditionary force was piloted up to Mandalay by officers of the Indian Marine Survey, who took an active share in the operations. They subsequently piloted the expedition from Mandalay to Bhamo, making a running

survey of the river. Their conduct, together with that of the other officers of the Indian Marine who were employed with the expeditionary force, elicited the admiration of the rear-admiral commanding the East India squadron, and the Governor-General in Council expressed his appreciation of the good services rendered by the Marine.

A Naval Brigade, as detailed in the margin, was also employed in connection with the Burma expedition. The brigade, which was placed under the orders of Major-General Prendergast, commanding the expeditionary force, was manned by officers and men detailed from ships of the Royal Navy. It took part in all the active operations against the enemy until the end of December, when the officers and men returned to their respective ships.

Officers	...	31
Seamen	...	351
Marines	...	62

During the operations in Upper Burma, detachments from the Royal Navy were also employed, in boat parties, in quelling disturbances in the Sittang Valley and in the Bassein District.

The Governor-General in Council conveyed to the naval Commander-in-Chief his cordial acknowledgment, of the services rendered by the Royal Navy during the war.

The Indian Marine vessels have since done good service in the trooping arrangements to and from Burma, and from port to port in India.

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